

# AGRICULTURAL OUTLOOK

Economic Research Service  
United States Department of Agriculture

November 1993



WILL CONSERVATION POLICY  
CHANGE COURSE?

# AGRICULTURAL OUTLOOK



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## News of Conservation Policy, Off-Farm Income & Ag Industry Jobs, & Rice Imports by Japan

### Agricultural Economy

**Off-farm income is key:** USDA's preliminary estimate of average farm household income in 1992—\$40,068—indicates nearly 90 percent coming from off-farm sources. The structure of the farm industry partly explains the large role of off-farm income. Most U.S. farms are small, and these farm operator households depend almost entirely on off-farm income.

However, even in households with half a million dollars or more in farm sales, one-third of total household income comes from off-farm sources. For the majority of farm households, rural economic development efforts are increasingly important. A growing local economy allows these households to improve their off-farm earnings, which in many cases makes the difference between low and adequate household income.

### Rural Development

**Ag industry jobs decline:** By 1990, only about one-quarter of U.S. counties were high agriculture-employment counties, according to USDA's Economic Research Service. This was down from 1975, when over 40 percent of counties fell into this category—having at least 25 percent of their total employment in farming and its closely related industries.

Labor-saving technology continues to erode jobs in farm production, and automation may impede further employment growth in industries processing farm products. New industrial uses for farm commodities—ethanol, soy-oil ink, and biodiesel fuel, for example—may help sustain jobs in the farm sector. However, development of nonagricultural businesses in rural areas is critical for increasing jobs in high ag-employment counties.

### World Agriculture & Trade

**Japan to buy foreign rice:** Japan's virtual ban on rice imports may give way, at least temporarily, to the realities of



weather and low domestic stocks. USDA estimates that Japan, faced with a poor 1993 rice crop, will import about 1.6 million metric tons of rice by the end of 1994.

Japanese consumers prefer japonica rice, which normally accounts for less than 15 percent of the world rice market. However, the impact on world prices is expected to be substantial because Japan's import needs are likely to exceed readily available japonica supplies from the two principal exporters of high-quality japonica: Australia and the U.S. This could trigger a significant price spillover in the indica market, which accounts for the bulk of world trade, and in the lower quality japonica market. Rice prices are already skyrocketing in anticipation of substantial tightening of exportable supplies by the end of 1993/94.

**EC exchange rate bands widen:** The European Community's (EC) new exchange rate system, adopted on August 2, 1993, could have mixed results for U.S.-EC trade. Most EC currencies are now allowed to vary within wider bands around their central exchange rates. Because central banks in EC countries

no longer have to maintain high nominal interest rates to keep currency values within a narrow range, interest rates can be allowed to fall.

In the short run, lower interest rates in the EC should weaken EC currencies relative to the dollar and the yen, tending to dampen EC imports and boost its exports. In the longer term, lower interest rates should spur economic growth, raising the EC's demand for imports.

### Commodity Spotlight

**Sweetpotatoes—beyond the holidays:** Sweetpotato demand peaks each year in November as the Thanksgiving holiday approaches. However, this highly nutritious vegetable is generally not a mainstay in the American diet. At about 4.3 pounds per person, annual consumption of sweetpotatoes is far lower than for major vegetables such as potatoes and tomatoes. The key to market expansion for sweetpotatoes—beyond the holiday and Southern niche—is their high nutritional quality, as healthful new cuisines are developed and the government expands efforts to promote nutritional eating patterns.

### Environment & Resources

**Conservation policy changing:** Public concerns over adverse environmental effects of agriculture are influencing conservation policy in general as well as agricultural policy in particular. Pressure for continued decrease in the level of agricultural price and income supports is also affecting conservation policy.

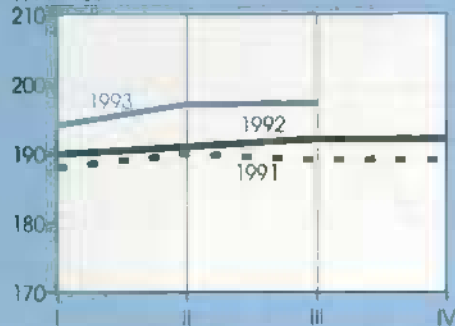
Maintaining the current level of conservation programs in the next farm bill will be difficult. Two approaches to agricultural and environmental policy will likely receive greater consideration: increased reliance on *command-and-control measures* (regulation), such as chemical bans, taxes, and fines, and use of *environmental stewardship payments* to reward environmental performance.

## Agricultural Economy

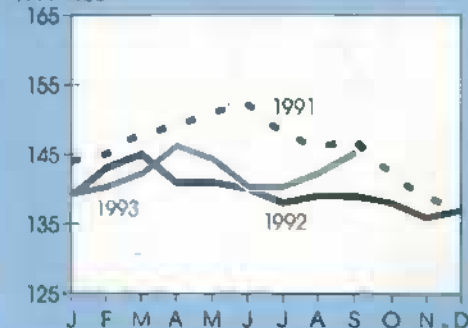
## Prime Indicators

Index of prices paid by farmers

1977=100

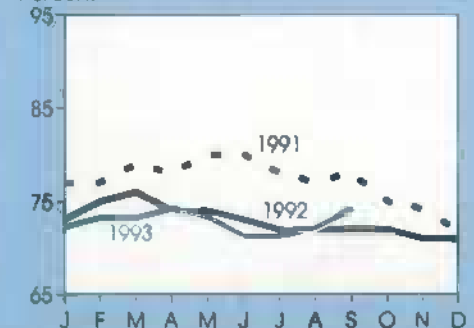
Index of prices received by farmers<sup>1</sup>

1977=100

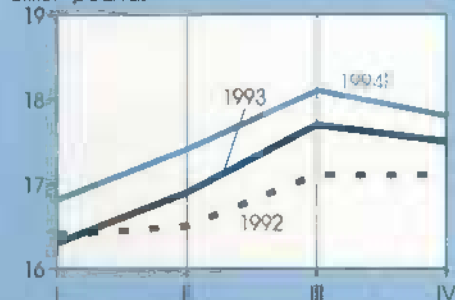


Ratio of prices received/prices paid

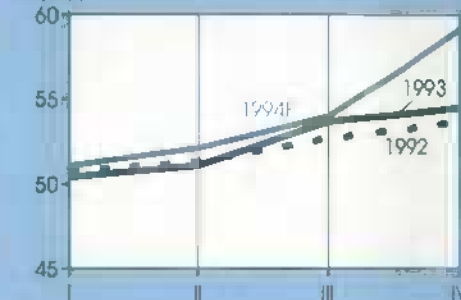
Percent

Total red meat & poultry production<sup>2</sup>

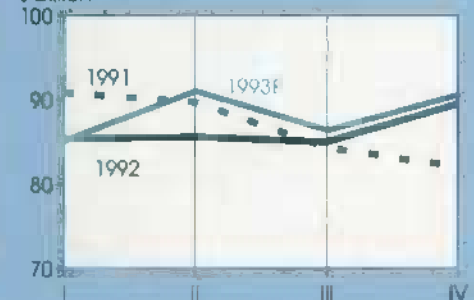
Billion pounds

Red meat & poultry consumption, per capita<sup>2,3</sup>

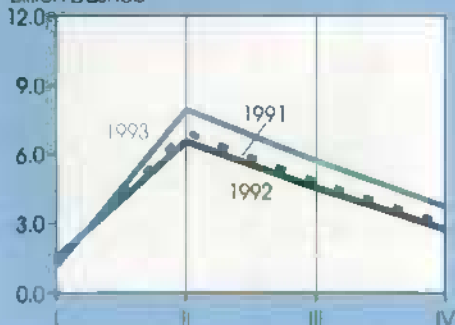
Pounds

Cash receipts from livestock & products<sup>4</sup>

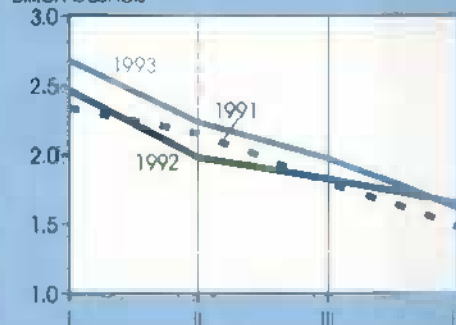
\$ billion

Corn beginning stocks<sup>5</sup>

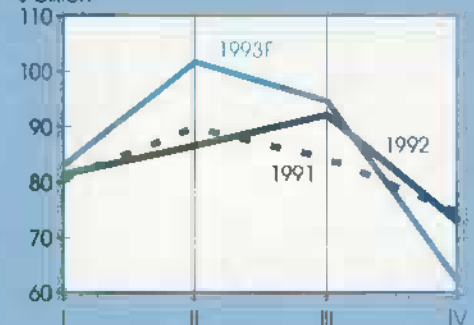
Billion bushels

Corn disappearance<sup>5</sup>

Billion bushels

Cash receipts from crops<sup>4</sup>

\$ billion



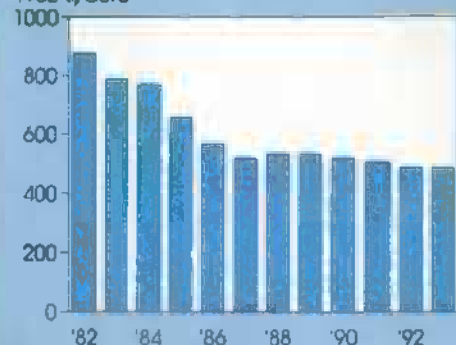
Farm loan interest rates

Percent



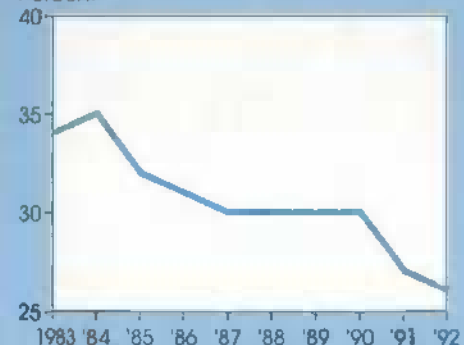
Average real value of farm real estate

1982 \$/acre



Farm value/retail food costs

Percent



<sup>1</sup> For all farm products. <sup>2</sup> Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>3</sup> Retail weight. <sup>4</sup> Seasonally adjusted annual rate. <sup>5</sup> I=Sept.-Nov.; II=Dec.-Feb.; III=Mar.-May; IV=June-Aug. Marketing years ending with year indicated. F=forecast.



## Off-Farm Income Plays Pivotal Role

**T**he increasing dependence of farm families on off-farm income predicted in the 1980 USDA report *Fewer, Larger Farms by Year 2000* is borne out by preliminary estimates of farm operator household income in 1992. Of the \$40,068 average, almost 90 percent came from off-farm sources.

The structure of the farm industry partly explains the large role of off-farm income. Although concentration of agricultural activities among large-scale farms continues, the U.S. still has numerous small farms. About 1.7 million of the nation's 2.1 million farm households operate small farms, and many of these households depend almost entirely on off-farm income.

Most off-farm income of farm households comes from wages and salaries or from off-farm businesses. In two-thirds of farm operator households, either or both the farm operator and spouse earned off-farm wage and salary income. Other sources of nonfarm income include interest, dividends, and Social Security.

The larger the farm, the less likely the farm operator is to have a major occupation off the farm, and the less likely the household will depend on off-farm income. However, even in farm households with half a million dollars or more in farm sales, one-third of total household income is from off-farm sources.

Total cash income of individual households in 1992 varied widely—and 8 percent actually lost money at the household level. Another 42 percent received positive income of \$28,846 or less. Only 30 percent received more than the average of \$40,068.

### *Income Averages Mask Farm-Sector Diversity*

Income earned from farm sales also varied among farm households in 1992, and average farm income estimates mask the diversity of farming. The average income figure combines the earnings of people who are full-time operators of very large farms with those who farm part-time and depend mainly on off-farm income. Farm types also differ in their

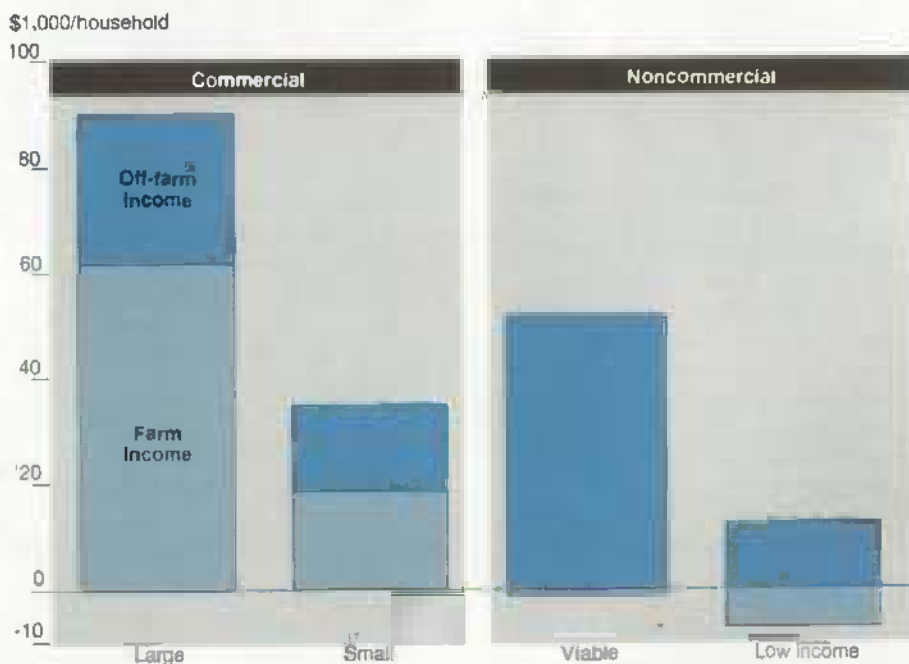
ability to generate farm income. Average income combines the receipts of a household managing a small apple orchard in New York, for example, with one operating a large feedlot in Texas.

To account at least partially for the diversity of farming, three mutually exclusive groups of farm households have been identified. The first major category—*commercial farms*—contains households whose operators identify farming as their major occupation and earn at least \$50,000 in gross farm sales. Households with noncommercial-sized farms were split into two categories—those with at least \$15,000 in total household income—*viable noncommercial farms*—and those under \$15,000—*low-income farms*.

### *Even Commercial Farms Draw Off-Farm Income*

In 1992, 24 percent of households operated farms that were large enough to potentially support the family (\$50,000 or more in gross sales) and to require substantial time from the operator. These

**Farming Is No Longer the Dominant Source of Farm Household Income**



Source: 1992 Farm Costs and Returns Survey.

## Agricultural Economy

full-time commercial farms account for most U.S. farm production, and received 75 percent of 1992 direct government farm program payments. Within the commercial farm group are large and small categories based on whether or not they make sales of \$250,000 or more. Average farm net worth of large commercial farms was over \$1 million, double that for small commercial farms.

Households operating commercial farms do well economically on average. Approximately 72 percent of large and small commercial farms are in favorable financial positions, with positive income and low debt/asset ratios. Commercial farm households received higher average farm income and higher average returns on assets and equity than other farm categories. Small commercial farms contribute \$17,373 to household income on average, and large commercial farms contribute over \$63,000.

Yet even in the commercial group, 22 percent of the large commercial farms and 26 percent of small commercial farms lost money farming in 1992. Because of farm losses, approximately 24 percent of households in the large commercial farm category and 32 percent of households running small commercial farms had low household income. If these farms are losing money on a continual basis, they may be at risk of going out of business or reorganizing the business structure.

The farm work that household members perform on commercial farms often leaves little time for off-farm employment. Almost 61 percent of full-time commercial farming households received more income from farming than from off-farm sources. But even for the largest farms, off-farm income is a significant portion of total household income. About half of the households had someone earning money from a job or business off the farm. Households operating small commercial farms received about 50 percent of household income from off-farm sources. And even the large commercial farms received 30 percent of their household income from nonfarm sources.

### Criteria for Farm Categories

Data from USDA's 1992 Farm Costs and Returns Survey were used to assign farms to one of three categories in this article. Farms in each category meet both criteria that describe the group.

#### "Commercial" farm:

- farm operator reports farming as the major occupation; and
- gross farm sales are at least \$50,000.

#### Viable "noncommercial" farm:

- lacks one or both of "commercial" criteria; and
- household income amounts to at least \$15,000.

#### Low-income farm:

- lacks one or both of "commercial" criteria; and
- household income amounts to less than \$15,000.

Commercial farms are concentrated in the Midwest, where cash grain and dairy commodities are more prevalent. But many of the largest commercial farms are in the West and produce crops such as fruits, vegetables, and cotton. Commercial operators tend to be younger and to have more education than other farm operators.

### Viable Noncommercial Farms & Off-Farm Income

The 54 percent of farm operator households in the group of viable noncommercial farms are viable because of their success in off-farm occupations. These households lost an average of \$817 farming in 1992, but their off-farm income brought average household income to

over \$50,000. Most of the operators of viable noncommercial farms spend the majority of their work time in occupations other than farming—and as a group they contribute a minority of total U.S. farm production. Seventy percent of the operators do not consider farming their major occupation.

Many of the farms in this category are operated as small part-time businesses. While their farm net worth was over \$200,000—almost double that for all U.S. households—it is only half as much as for the smallest commercial farms. In 1992, most of these households, 63 percent, lost money farming, although a handful earned even more than \$50,000 in net farm income.

About 80 percent of average household income came from wages, salaries, or an off-farm business. Another 21 percent was unearned income from returns on investments, Social Security, and other off-farm sources. Off-farm income can exceed total household income since it offsets negative farm income in these households.

Viable noncommercial farms are concentrated in the South, and over half specialize in livestock production. The operators are well educated; 22 percent had at least some college education and an additional 21 percent hold a college degree.

### Most Low-Income Farms In South & Midwest

Some farm operator households have neither the farm assets to generate sufficient income to support a family, nor the opportunity to combine farm and nonfarm sources of income successfully. Twenty-two percent of households were in this low-income category, with combined income sources below \$15,000 (approximately the poverty threshold for a family of four). These households lost \$7,334 on average on their farm operation. Off-farm income was only \$11,550 on average, bringing average household income to only \$4,216.

Their farms are small whether measured by acreage, sales, or net worth. Only 32 percent of the farms were in a favorable financial position with positive net incomes and low debt.

Even though many low-income farm operators were committed to farming as their major occupation, their labor on the farm did not bring adequate income to their households. However, while current income is low, these operator households have a store of wealth in the farm business. Farm net worth for this group was \$230,626, compared with approximately \$100,000 for all U.S. households.

Operators in this group were older and had less formal education than other farm operators, limiting their off-farm opportunities. Fewer farm operators and members of these households reported performing off-farm work than commercial and viable noncommercial farm operators and household members. Most low-income farms are located in the South (46 percent of the total) and in the Midwest (35 percent).

The situation of these households raises the question of why they remain if they are not making a living at farming. Some may stay because they prefer a rural lifestyle. Cash requirements to pay off-farm debt and cover living expenses are generally low for this group. Alternatives to farming, such as moving into a metropolitan area, may be even less financially rewarding, given their limited education and training.

### The Role of Rural Development

Traditional farm commodity programs are most likely to have an impact on households running commercial farms and specializing in program commodities. Economic development in rural areas is probably most important to the noncommercial farm households. A growing local economy allows these households to improve their off-farm earnings, which in many cases makes the difference between low and adequate household income.

Rural development might also help low-income households find work off the farm. Policies directed at farm production or rural job development are unlikely to help elderly low-income farm operators. Programs to increase human capital and rural development could, however, allow younger operators to supplement their income by working off the farm.

[Janet Perry and Bob Hoppe (202) 219-0807] **AO**

## Field Crops Overview

*Major field crops are maturing at substantially different rates across regions. Harvest of feed grains is behind schedule in the Midwest and Northern Plains due to late plantings and heavy rains during the growing season. Oilseeds in the Southeast have matured ahead of schedule due to stress from drought.*

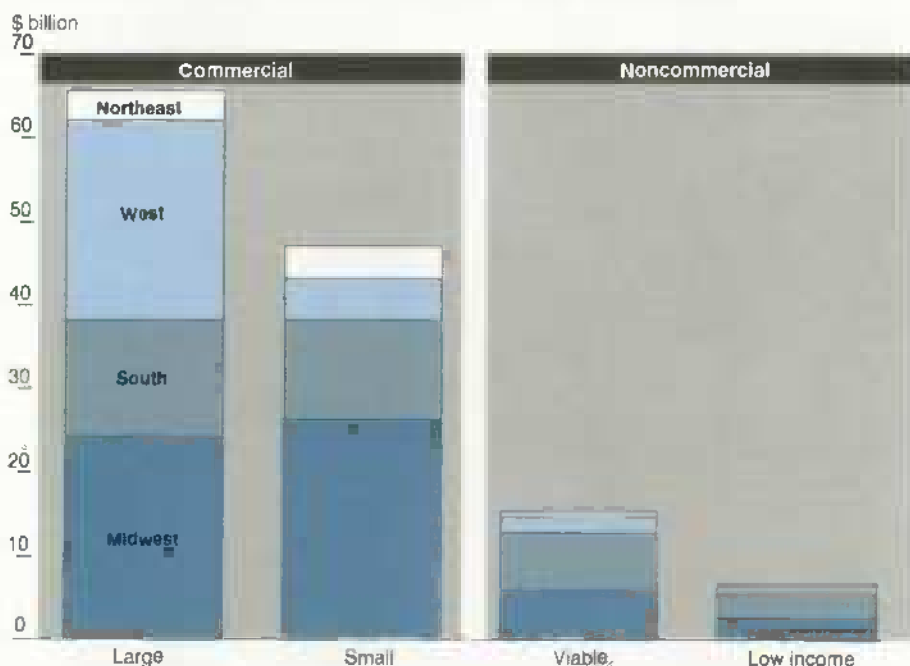
*The corn production forecast is down 2.5 billion bushels from last year. Sorghum, barley, and oat production are also down. Wheat is down slightly from last year, as lower yields more than offset an increase in harvested acres. Soybean production suffered from wet weather in the Midwest, while peanut production was reduced by drought in the Southeast. Both harvested acres and yield are down for rice, resulting in lower forecast production. Cotton acreage increased, offsetting modest yield declines, and production is up from 1992/93.*

### Domestic Outlook—October Projections For 1993/94

#### Feed Grain Production Down

Total feed grain production in 1993/94 is down 26 percent from last year. Feed grain ending stocks are forecast tighter due to smaller supplies coupled with a relatively modest decline in use. Corn

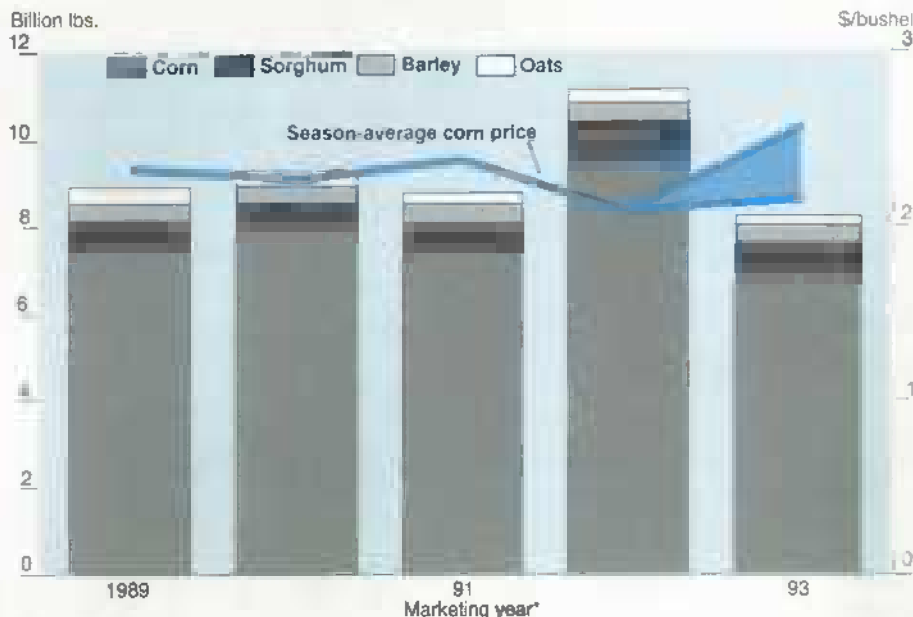
The Midwest Accounts for Largest Share of Agricultural Production



Source: 1991 Farm Costs and Returns Survey.

## Agricultural Economy

### Corn Price To Rise with Smaller Feed Grain Crops



1993 forecast range.  
\* Marketing year begins September 1 for corn and sorghum, June 1 for barley and oats.

production is down from a year earlier, as are sorghum, barley, and oats production.

- Harvested corn acreage is down 9 million acres, and yield has fallen 16 percent from 1992/93. The production forecast for 1993/94 is 7 billion bushels, 27 percent below last year. Even with increased carryin stocks, total corn supply is down 14 percent from 1992/93.
- Sorghum harvested area is down 20 percent, and combined with lower forecast yield per acre, will result in lower production for 1993/94. Forecast production of 63.9 million bushels is 28 percent below 1992/93 production.
- Lower barley acreage and yields will likely result in production of 416 million bushels, down 9 percent from a year earlier. Oats production dropped 29 percent, to 208 million bushels, in 1993/94.

- Total feed grain use is down from 1992/93. However, the production decline outweighs the fall in use, resulting in a forecast for smaller ending stocks—46 percent below last year. Domestic corn use is projected down 3 percent from a year earlier. The stocks-to-use ratio for corn is 13.6 percent, compared with 24.9 in 1992/93.
- The corn farm price is forecast between \$2.20 and \$2.60 per bushel.
- The U.S. corn crop was 22 percent harvested as of October 17. This compares with a historical average of 51 percent harvested this time of year. Crop condition was 46 percent good to excellent, with 18 percent poor to very poor. This time last year only 4 percent was in poor to very poor condition.

### Wheat Output Varies by Class

Although harvested acreage is up from last year, a drop in average yield is result-

ing in total wheat production forecast slightly below 1992/93 levels. However, changes in production vary by class. Production of soft red, hard spring, and durum wheat are down, while hard winter and white wheat production are up.

- Total wheat production is estimated at 2.4 billion bushels for 1993/94, down 37 million bushels from a year earlier. The decline in production is due to a 1-bushel-per-acre decrease in average yield outweighing a small increase in harvested area.
- While total domestic use of wheat is projected to be 1.2 billion bushels in 1993/94, up 8 percent, exports are forecast well below last year. This will contribute to higher ending stocks. The stocks-to-use ratio is forecast to be 30 percent, compared with 21 percent in 1992/93.
- Average farm price is forecast between \$2.75 and \$3.05 per bushel. This is below last year's estimate of \$3.24 per bushel.
- Winter wheat planting for the 1994/95 season was 80 percent complete as of October 17. Fifty-seven percent of wheat acreage had emerged, compared with 58 percent a year earlier.

### Rain & Drought Cut Soybean Crop

Soybean production in 1993/94 is projected down due to heavy rains and flooding in the Midwest and drought in the Southeast. Average yield is forecast down 10 percent, compounding the effect of lost or abandoned acreage.

- Harvested acreage fell from 58.2 million acres in 1992/93 to 56 million in 1993/94. Acreage lost or abandoned amounted to 5.9 percent of planted area, compared with 1.9 percent in 1992/93.
- Soybean production is forecast to be 1.9 billion bushels in 1993/94, down 14 percent from 1992/93.

## Agricultural Economy

- Although total soybean use is projected down in 1993/94, the decline in production is expected to outweigh the drop in use, resulting in lower ending stocks. The stocks-to-use ratio is forecast to be 10 percent.
- The soybean harvest was 57 percent complete as of October 17. Ninety-two percent of acreage showed leaf drop.
- As of October 17, 47 percent of the soybean crop was rated good to excellent, compared with 79 percent last year. Soybeans in poor to very poor condition accounted for 13 per-

cent of the crop, compared with 2 percent last year.

### Rice Output Down, Stocks Tighten

With smaller area and lower average yield, U.S. rice production is projected down from last year's near-record crop. The combination of lower production and increased demand has tightened forecast ending stocks.

- Harvested area is projected to drop from the near-record 3.1 million acres in 1992/93 to 2.9 million in

1993/94. Yield is down 101 pounds, resulting in forecast production of 165 million cwt, well below last year's 179 million cwt.

- Domestic and residual use of rice is forecast up, from 96.1 million cwt in 1992/93 to 99.5 for the 1993/94 crop year. Projected exports of 87 million cwt are up 13 percent from last year.
- A smaller supply coupled with increased use has reduced forecast ending stocks to 24.9 million cwt, down 37 percent from 1992/93. The stocks-to-use ratio falls from 23 percent to 13 percent.
- Average farm price is forecast in the range of \$7.50 to \$9 per cwt for 1993/94, up substantially from the estimate of \$5.90 for last year.
- As of October 17, 85 percent of the rice crop was harvested. The crop condition was 55 percent good to excellent, with no acreage in poor to very poor condition as of October 10.

### U.S. Field Crops—Market Outlook at a Glance

	Area		Yield	Output	Total supply	Domestic use	Exports	Ending stocks	Farm price
	Planted	Harvested							
	Mil. acres	Bu/acre							
Wheat									
1992/93	72.3	62.4	39.4	2,459	3,001	1,118	1,354	529	3.24
1993/94	72.1	63.0	38.4	2,422	3,026	1,204	1,125	697	2.75-3.05
Corn									
1992/93	79.3	72.1	131.4	9,479	10,585	6,798	1,675	2,113	2.07
1993/94	73.7	63.1	110.3	8,962	9,085	6,600	1,400	1,085	2.20-2.60
Sorghum									
1992/93	13.3	12.2	72.8	884	937	487	275	175	1.89
1993/94	10.7	9.7	65.6	639	814	448	275	92	2.00-2.40
Barley									
1992/93	7.8	7.3	62.5	458	598	366	80	151	2.05
1993/94	7.9	7.1	58.9	416	592	375	85	132	2.05-2.25
Oats									
1992/93	8.0	4.5	65.6	295	477	358	6	113	1.32
1993/94	7.9	3.8	54.6	208	401	305	5	91	1.35-1.55
Soybeans									
1992/93	59.3	58.4	37.6	2,188	2,468	1,401	775	292	5.60
1993/94	59.5	56.0	33.7	1,891	2,188	1,343	640	205	5.85-6.65
		Lb/acre				Mil. cwt (rough equiv.)			\$/cwt
Rice									
1992/93	3.17	3.13	5,722	179.1	212.6	96.1	77.0	39.4	5.90
1993/94	3.02	2.94	5,621	165.3	211.4	99.5	87.0	24.9	7.50-9.00
		Lb/acre				Mil. bales			¢/lb
Cotton									
1992/93	13.2	11.1	699	16.2	19.9	10.2	5.2	4.7	54.60*
1993/94	13.7	13.3	614	17.0	21.7	10.3	6.0	5.4	**

Based on October 12, 1993 World Agricultural Supply and Demand Estimates; U.S. marketing years for exports, 1992/93 estimates, 1993/94 projections.

\*Weighted-average price for August 1-April 1; not a season average.

\*\*USDA is prohibited from publishing cotton price projections.

See table 17 for complete definition of terms.

### High Cotton Acreage Raises Output

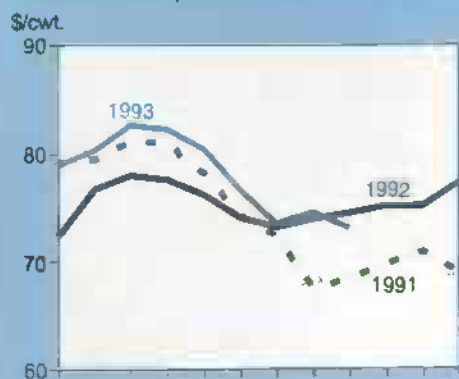
Cotton production is forecast higher in 1993/94 than a year earlier. A modest decline in average yield was outweighed by a large increase in harvested acreage. The large upswing in production relative to the rise in use has resulted in a forecast of larger ending stocks.

- Average yield is forecast at 614 pounds per acre, down 12 percent from a year earlier. Total harvested acreage rose 19 percent from 1992/93, to 13 million acres. Cotton production is forecast at 17 million bales, up 5 percent from last year.
- Domestic use is forecast to rise slightly. Cotton exports are expected to increase from 5.2 million bales in 1992/93 to 6 million bales in 1993/94.

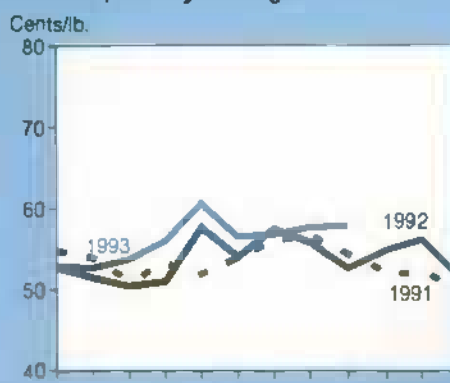
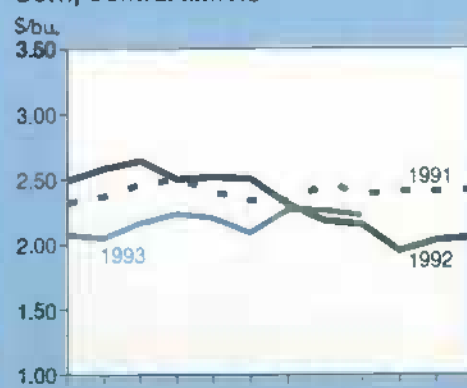
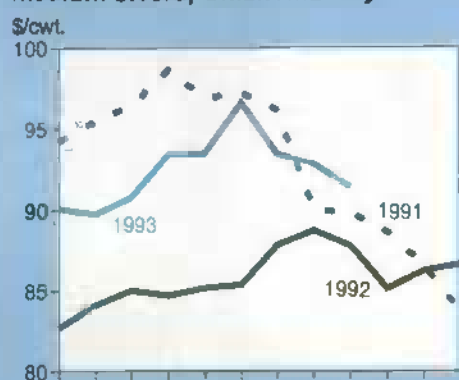
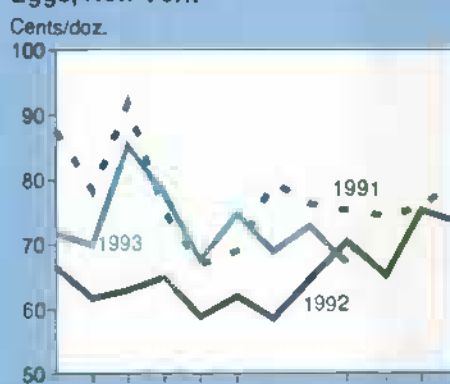
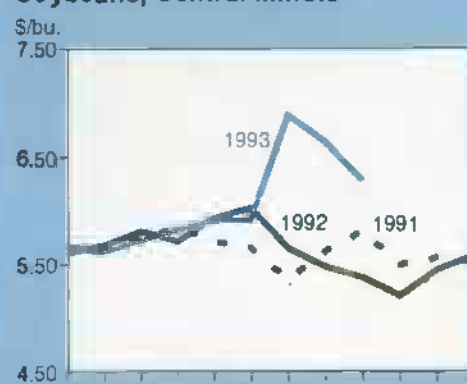
## Agricultural Economy

## Commodity Market Prices

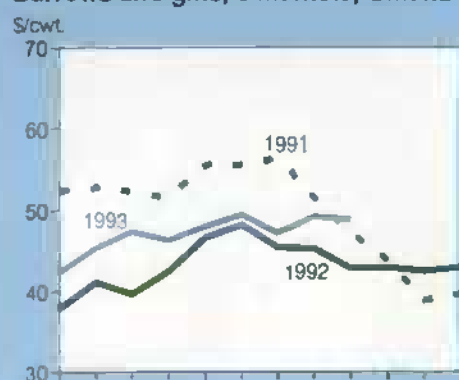
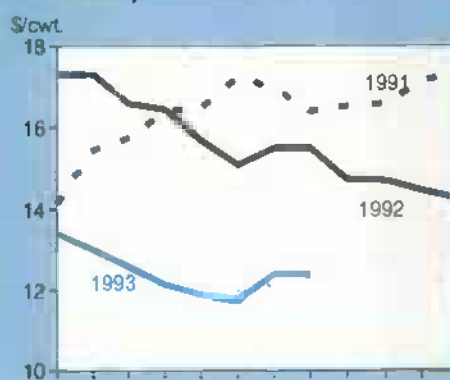
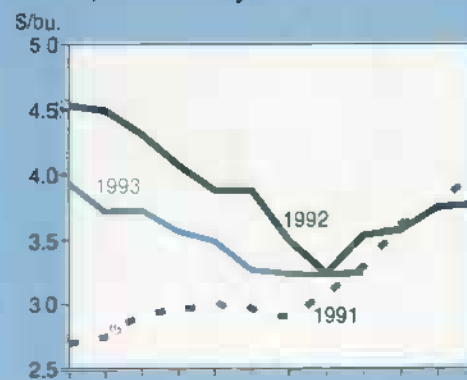
Choice steers, Nebraska



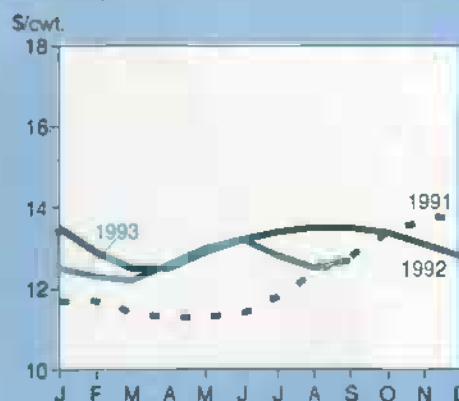
Broilers, 12-city average

Corn, Central Illinois<sup>1</sup>Medium steers, Oklahoma City<sup>2</sup>Eggs, New York<sup>3</sup>Soybeans, Central Illinois<sup>4</sup>

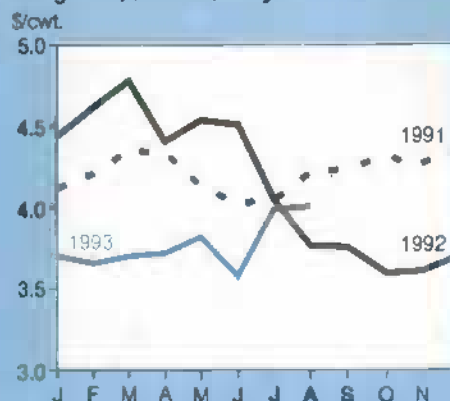
Barrows and gilts, 6 markets, Omaha

Milled rice, SW Louisiana<sup>5</sup>Wheat, Kansas City<sup>6</sup>

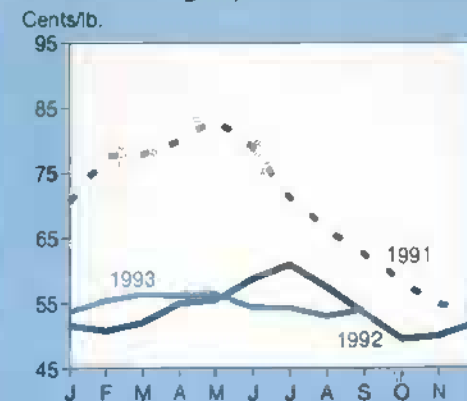
All Milk



Sorghum, Kansas City



Cotton, average spot market



<sup>1</sup>No. 2 yellow. <sup>2</sup>600-700 lbs. medium no.2. <sup>3</sup>Grade A large. <sup>4</sup>No. 1 yellow. <sup>5</sup>U.S. No.2 long-grain. <sup>6</sup>No. 1 HRW.

- With growth in production expected to outpace expansion in use, ending stocks should rise to 5.4 million bales. The stocks-to-use ratio is 33 percent, compared with 30 percent in 1992/93.
- Cotton harvest was 47 percent complete as of October 17, with bolls opening on 92 percent of acreage. The cotton crop was rated 44 percent good to excellent, with only 15 percent of acreage in poor or very poor condition.

## Lower Yields

### Reduce Peanut Production

The peanut crop has suffered from drought in the Southeast, pushing average yield down 23 percent from last year. Production is forecast down from 1992/93.

- Peanut production is forecast to be 3.3 billion pounds in 1993/94, down from 4.3 billion a year earlier. Harvested acres are down 1.4 percent, while average yield declined from 2,562 to 1,975 pounds per acre.
- Beginning inventory, combined with current production, should result in 1993/94 peanut supply of 4.6 billion pounds, down 13 percent from last year.
- Domestic food use of peanuts has weakened in recent years primarily due to falling peanut butter production. Despite lower forecast peanut production for 1993/94, output is likely to exceed demand, posing the possibility for CCC outlays again this season.

[Grace V. Chomo (202) 219-0840]

## Global Market— Outlook for 1993/94

### Global Rice Market Tightens Dramatically

Cool, cloudy weather during the growing season and throughout the summer in Japan reduced rice output there to the lowest in decades. Coupled with recent output reductions for India, South Korea, Thailand, and the U.S., this drop pulled global 1993/94 rice production below last year.

Because of the low outturn, Japan has indicated it will need to import rice. Japanese consumers prefer japonica rice, which normally accounts for less than 15 percent of the world rice market. Exports from the U.S. and Australia, the leading suppliers of japonica rice, are expected to rise. But with Japan's needs likely exceeding this season's exportable supplies of japonica, both Japan and other traditional japonica buyers will likely purchase more indica rice this season, raising exports from other suppliers as well.

Rice prices are already skyrocketing in anticipation of substantial tightening of exportable rice supplies by the end of 1993/94. Yearend rice stocks in the U.S., Australia, Thailand, Japan, Taiwan, and South Korea—all major exporters or consumers—are expected to drop to minimal levels. However, China holds large stocks of very low-quality rice, previously in low demand, which could become more marketable in some importing countries if prices reach high levels.

- Projected global rice production is down 1 percent from 1992/93.
- Japan's projected production was recently reduced to 7.5 million tons—a 22-percent drop from last year's 9.6 million.
- Calendar 1994 world imports are now projected to be 14.9 million tons, up 900,000 tons or 6.7 percent from a year earlier.

- U.S. exports will likely rise to 2.8 million tons in calendar 1994 from 2.5 million in 1993.
- Global ending stocks are expected to drop 10 million tons, to the lowest level since 1976/77.

### Wheat Demand Sluggish

The world wheat situation is still characterized by weak demand and plentiful supplies. Output is projected above 1992/93, with imports to decline significantly because of reduced purchases by major importers, notably the former Soviet Union and China. U.S. exports are expected to drop, but those of major competitors, except Australia, will also decline.

- Global wheat imports are projected down 9 percent from 1992/93.
- U.S. exports are projected at 30.6 million tons, down 18 percent.

### Coarse Grain Demand Continues Weak

Like wheat, global coarse grain imports are expected to be sharply lower in 1993/94 because of less demand among major importers. But unlike wheat output, global coarse grain output is projected to drop significantly because of the sharp drop in the U.S. crop. Foreign production is forecast up, contributing to lower import demand.

Among exporters, the U.S. is expected to make the largest adjustment, reducing exports sharply. Forecast changes in China's and Argentina's exports offset each other, while the Republic of South Africa resumes exporting after no exports last season.

- Global 1993/94 corn imports are projected down 7 percent, while barley imports rise.

## Agricultural Economy

### Global Rice Trade To Expand

	Year <sup>1</sup>	Production	Exports <sup>2</sup>	Consumption <sup>3</sup>	Carryover
<i>Million tons</i>					
Wheat	1992/93	560.0	109.4	550.5	138.0
	1993/94	564.4	99.9	561.9	140.6
Corn	1992/93	529.7	59.9	506.6	102.1
	1993/94	466.0	55.7	499.8	68.5
Barley	1992/93	165.5	15.6	167.0	29.9
	1993/94	169.9	16.5	169.6	30.2
Rice	1992/93	351.0	13.9	354.1	51.8
	1993/94	345.2	14.9	355.7	41.2
Oilseeds	1992/93	226.6	37.9	184.4	23.7
	1993/94	224.7	37.4	185.9	21.7
Soybeans	1992/93	116.5	29.8	96.3	20.9
	1993/94	112.5	29.0	96.9	18.4
Soybean meal	1992/93	76.6	27.6	75.3	3.6
	1993/94	76.9	28.1	76.5	3.6
Soybean oil	1992/93	17.3	4.3	17.3	2.0
	1993/94	17.6	4.4	17.7	1.7
<i>Million bales</i>					
Cotton	1992/93	82.6	24.9	86.7	38.1
	1993/94	82.5	26.6	87.0	33.6

<sup>1</sup> Marketing years are: wheat, July-June; coarse grains, October-September; oilseeds, soybeans, meal, and oil, local marketing years except Brazil and Argentina adjusted to October-September trade; cotton, August-July. <sup>2</sup> Rice trade is for the second calendar year. All trade now has been inflated to include trade among the countries of the former Soviet Union. In addition, for the first time, rice trade, like other grain trade, excludes intra-EC trade. Oilseed and cotton trade, however, still include intra-EC trade. <sup>3</sup> Crush only for soybeans and oilseeds.

- U.S. corn exports, projected at 36 million tons, are down 14 percent, and the U.S. share of world corn exports slips to 65 percent from 70 percent last year.
- U.S. barley exports are projected at 1.8 million tons, somewhat above the estimated level for 1992/93 and greater than earlier anticipated.

### U.S. Soybean & Soybean Meal Exports Down

Larger foreign oilseed supplies and slowing growth in global soybean consumption continue to limit prospective 1993/94 U.S. soybean and soybean meal exports. Further gains anticipated in South American production have been

offset by additional expected decreases in the U.S. and elsewhere, so that global production remains below last year. With weak foreign demand and forecast for smaller U.S. output, U.S. exports of both soybeans and soybean meal have again fallen from previous projections.

- Projected U.S. 1993/94 soybean exports drop 17 percent to 17.4 million tons, and soybean meal exports fall 15 percent, to 4.9 million, as U.S. export market share shrinks to 60 percent for soybeans and 17 percent for soybean meal.
- Global soybean output is forecast 3.5 percent below last season.
- Global oilseed production also shows further declines as peanut output in India and the U.S., two of the

three major producers, drop 14 and 24 percent from 1992/93.

### U.S. Cotton Exports To Rise

Previous projections of growth in 1993/94 world cotton production have been revised; no growth is now anticipated in cotton output this season. In the latest downward revision, the U.S. crop accounted for all the change. Lower U.S. production means China is expected to regain the position of the leading cotton producer for 1993/94.

Increases in global consumption are still anticipated, but projected gains have been reduced as consumption in Russia flounders under financial difficulties. Exports are expected to rise. But projected gains in U.S. exports have been scaled back from earlier expectations because of slow import demand and rising foreign competition.

- World cotton output is now projected unchanged, and the consumption forecast rises only fractionally, while exports are projected nearly 7 percent above last season.
- Foreign exports are projected up 4.3 percent.
- U.S. exports should rise 15 percent to 6 million bales, and market share should climb to 22.6 percent from 1992/93's 20.9 percent.

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**For further information, contact:** Sara Schwartz, world wheat; Randy Schnepf, world rice; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Tom Tice and Jim Cole, domestic feed grains; Nancy Morgan and Jaime Castaneda, world oilseeds; Scott Sanford and George Douvelis, domestic oilseeds; Steve MacDonald, world cotton; Bob Skinner and Les Meyer, domestic cotton. World information (202) 219-0820; domestic (202) 219-0840. **AO**

## Livestock, Dairy & Poultry Overview

*Fourth-quarter beef supplies are expected to be the largest since 1986, and will continue to pressure slaughter cattle prices. Seasonally lower fed cattle marketings, however, should help support slaughter cattle prices during the upcoming holidays. Although rising seasonally this fall, pork supplies are expected to be below a year ago and will support higher hog prices. Strong retail and food-service demand, as well as record exports, are supporting broiler and turkey prices, while increasing egg supplies continue to pressure egg prices downward.*

### Beef Supplies Continue To Rise

Cattle slaughter weights are at record levels, and fourth-quarter beef supplies from fed steers and heifers are expected to be

the largest in nearly a decade. Ample supplies of beef helped lower slaughter cattle prices this fall. However, seasonally lower fed cattle marketings are expected through December, which should help support higher slaughter cattle prices during the upcoming holidays. However, feedlot inventories will continue to grow, and slaughter cattle prices may not rise beyond the mid-\$70's per cwt during the remainder of 1993.

- Fourth-quarter fed cattle marketings likely will be the largest since 1988.
- September's cattle-on-feed inventories were 11 percent above a year earlier and are expected to remain 4-5 percent higher than a year earlier the rest of 1993.
- Slaughter cattle prices dropped sharply during late September, and remained near \$70 per cwt through mid-October, compared with \$75 in September.

Also adding to near-record fourth-quarter beef supplies will be seasonally larger nonfed cow and bull slaughter. Fourth-

quarter cow slaughter is expected to be unchanged from a year earlier, but a higher proportion of cow slaughter will come from beef herds which typically dress out at lighter weights than dairy cows. Processing beef supplies will be supplemented by lower quality cuts from fed steers and heifers, which are already priced near or below lean beef from domestic cow slaughter and imports. Despite the recent decline in fed cattle prices and larger numbers of cattle moving off late-summer pastures, feeder cattle prices remain relatively stable.

- Lighter weight calves are bringing prices well over \$100 per cwt, while heavier stocker cattle continue to trade for \$85-\$90 per cwt.
- The higher prices have kept feedlot breakeven prices in the mid- to upper \$70's per cwt, well above current fed cattle prices.
- Feedlot losses likely exceeded \$50 per head during October, and additional losses are likely well into the fourth quarter as breakeven prices reach \$80 or more.

### U.S. Livestock and Poultry Products—Market Outlook at a Glance

		Beginning stocks	Production	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price
								Total	Per capita	
		----- Million lbs. -----						----- Lbs. -----		\$/cwt
Beef	1993	360	23,171	2,410	25,941	1,300	350	24,291	65.9	76-77
	1994	350	23,993	2,370	26,713	1,400	350	24,963	67.1	71-77
Pork	1993	385	16,892	670	17,947	410	385	17,152	51.6	47-48
	1994	385	16,949	680	18,014	395	375	17,244	51.3	45-51
----- c/lb -----										
Broilers*	1993	33	21,932	0	21,965	1,765	33	20,167	68.7	54-55
	1994	33	23,077	0	23,110	1,850	33	21,227	71.6	50-56
Turkeys	1993	272	4,824	0	5,096	200	260	4,636	18.0	61-62
	1994	260	4,921	0	5,161	215	275	4,691	18.0	58-64
		----- Million doz. -----						----- No. -----		¢/doz
Eggs*	1993	13.5	5,944.0	5.0	5,962.5	152.6	12.0	5,035.1	234.1	72-73
	1994	12.0	5,990.0	4.5	6,006.5	157.0	12.0	5,057.5	232.9	67-73

Based on October 12, 1993 World Agricultural Supply and Demand Estimates. 1993 estimates. 1994 projections.

\*Total consumption does not include eggs used for hatching.

See tables 10 and 11 for complete definition of terms.

## Agricultural Economy

Cumulative beef imports monitored under the Meat Import Law were slightly below a year earlier through the middle of October. As of October 16, Australia had supplied 89 percent, and New Zealand 95 percent, of the beef agreed to under voluntary restraint agreements with the U.S. Favorable prices in the U.S. will likely continue to attract beef from Canada.

- Total beef imports for 1993 are expected to reach 2.4 billion pounds, equal to 10 percent of U.S. production.
- Imports from Canada through mid-October, which are not limited by the Meat Import Law, are up nearly 22 percent from a year earlier.

U.S. beef exports continue to lag behind a year earlier due to smaller shipments to South Korea and Mexico. Higher 1994 exports will depend on renewed economic strength in Japan and slightly higher exports to Korea and Mexico.

- Shipments to Japan through August were nearly 15 percent above the same period in 1992, and accounted for nearly 56 percent of total exports.
- Beef exports for 1993 are expected to fall about 2 percent from last year's record level, but will be the second highest. In 1994, beef exports are forecast to rise to record levels.

### Pork Production Expected Higher

The September *Hogs and Pigs* report indicated that producers plan to have 3 percent fewer sows farrow during September-November than a year earlier, but about 2 percent more in December-February. The March 1 and June 1 inventories of hogs and pigs on farms were revised downward, along with the number of pigs born during December-February and March-May. The total inventory of hogs and pigs since June has been below a year ago. The number of pigs born this year is also down due to fewer sows far-

rowing, although pigs per litter continue their generally long-term rise. Hog slaughter continues to be below a year earlier.

Producers' returns have improved in 1993 over 1992. Despite expected higher feed costs in 1994, producers' returns will remain positive as hog prices are expected to average slightly above 1993. The favorable prices suggest rising year-over-year pork production beginning in second-half 1994.

- Both the total inventory of hogs and pigs and the market hog inventory were down 4 percent from a year earlier, while the number kept for breeding was down 5 percent.
- Pork production is expected to increase less than 1 percent in 1994 from a year earlier. Fourth-quarter 1993 pork production is expected to be 4.3 billion pounds, down from 4.6 billion pounds a year earlier.
- Hog prices are expected to average in the high \$40's per cwt this fall and will likely average \$45-\$51 per cwt in 1994, compared with \$47-\$48 a year earlier.
- Average retail pork prices during the fourth quarter are expected to be 1-2 percent higher than a year earlier and to average 1-3 percent higher in 1994.

### Broiler Production Continues Expansion

Favorable net returns continue to encourage expansion of broiler production. Strong retail and food-service demand, and record exports, are keeping prices above a year earlier, despite seasonal declines. And while feed prices have been inching up, they have not risen enough to affect production costs appreciably.

- Broiler production in 1993 is expected to increase 5 percent from a year earlier, with similar growth expected in 1994.

- Production in the fourth quarter will increase almost 5 percent from a year earlier due to increased hatching and a resumption of heavier slaughter weights as temperatures moderate.
- Fourth-quarter wholesale prices will average 50-56 cents a pound, about the same as a year earlier. The average wholesale broiler price for 1994 is expected to be 50-56 cents per pound, compared with 55 cents in 1993.
- Retail prices for whole broilers are expected to remain stable for the rest of 1993 and during 1994, averaging 87-88 cents a pound, about the same as 1992.
- Per capita broiler consumption in 1993 is expected to rise to almost 69 pounds, retail basis, and surpass 71 pounds in 1994.
- U.S. broiler exports will likely increase nearly 20 percent in 1993 from last year to about 1.8 billion pounds, and equal 8 percent of total production. Exports are expected to reach 1.85-1.9 billion pounds in 1994.

### Turkey Prices Rise As Holidays Approach

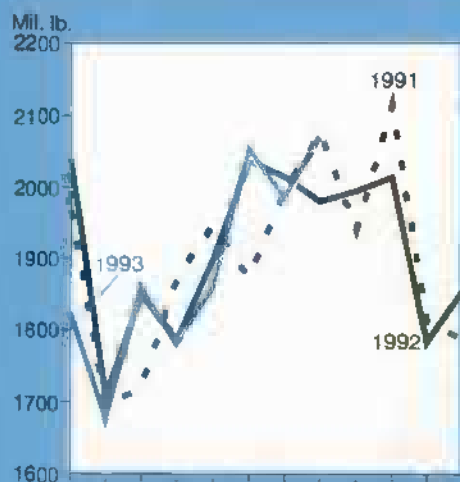
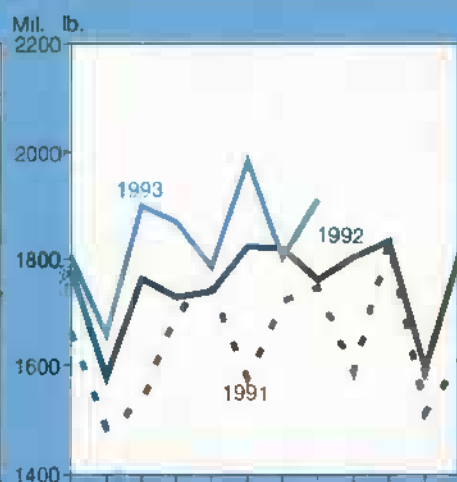
A moderate rise in production, increased domestic purchases, and record exports have resulted in higher turkey prices as Thanksgiving approaches. Much of the export growth in 1993 is due to greater sales to Mexico, which accounts for 70 percent of U.S. turkey exports. Eastern region wholesale hen prices have been above a year earlier since July, and October prices were the highest in 3 years.

- First-quarter 1994 turkey production is expected to be 1-2 percent above a year earlier. For all of 1994, turkey output is expected to be 1-2 percent above 1993, similar to this year's rate of growth.

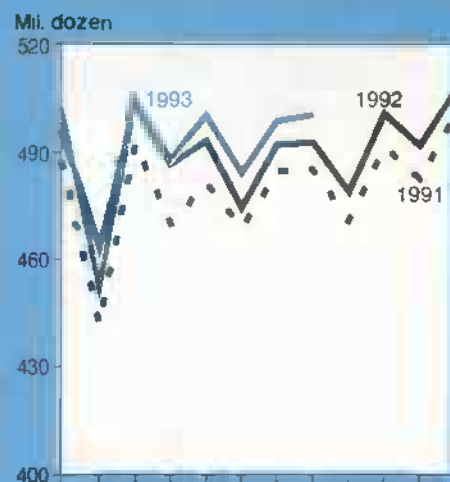
## Livestock &amp; Product Output

## Agricultural Economy

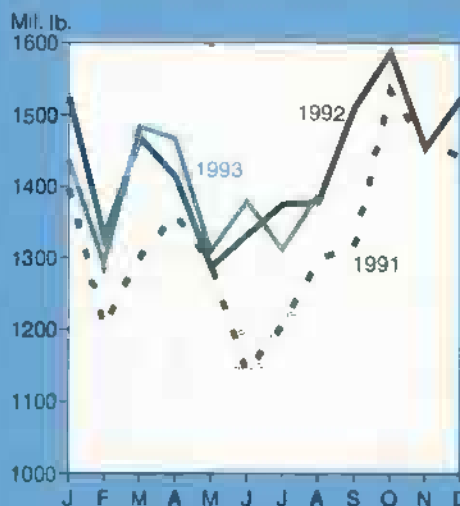
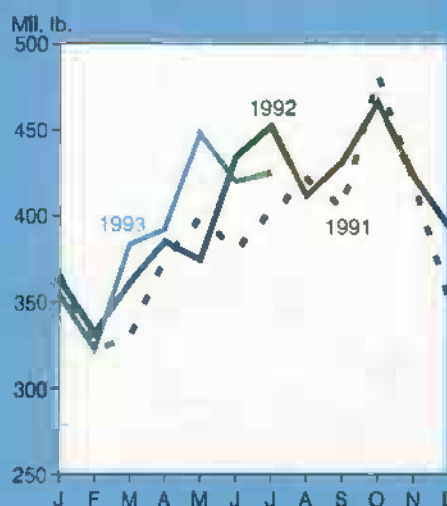
Commercial beef

Broilers<sup>1</sup>

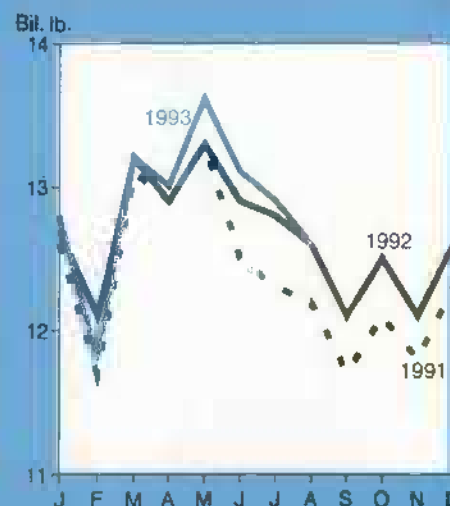
Eggs



Commercial pork

Turkeys<sup>1</sup>

Milk

<sup>1</sup>Federal inspection production, ready-to-cook.

- Fourth-quarter 1993 prices are estimated to be 64-70 cents a pound, compared with 64.9 cents a year earlier.
- Hen prices are expected to average 61-62 cents in 1993, compared with 60.2 cents last year.
- Supplies available for Thanksgiving are estimated slightly lower than last year. However, fourth-quarter per capita consumption will be little changed from last year's record of 6.5 pounds.

- Per capita consumption for 1993 is also expected to remain about the same as last year's 18 pounds. Beginning stocks in 1994 are forecast slightly lower than a year earlier and provide a more favorable outlook for producers.
- Exports in 1994 are forecast at a record 215 million pounds. For 1993, exports are expected to be about 200 million pounds, up about 17 percent from last year.

### Egg Returns To Remain Above Breakeven

While flock productivity has been lower than last year, total egg production was up slightly from a year earlier June through August. The higher production is increasing egg supplies and pressuring prices. Egg prices fell below the cost of production during early September, the first time since August 1992. While returns are limited by lower prices, they will remain above breakeven on average during the second half of the year.

## Agricultural Economy

- The September 1, 1993 flock size was 236.6 million, 3 percent larger than a year earlier. Fourth-quarter 1993 table-egg production will be about 1.3 billion dozen, 2 percent above a year earlier.
- Fourth-quarter returns are estimated to be 5 cents per dozen, down from 9.9 cents a year earlier.
- Annual net returns for 1993 will be about 8 cents per dozen, while returns for 1994 are forecast near 4 cents.
- Egg exports are expected to decline slightly in 1993 to 153-155 million dozen, shell-egg equivalent. Exports should increase in 1994 to about 157 million dozen, shell-egg equivalent, boosted by lower prices.
- Egg imports in 1993 are expected to reach 5 million dozen, shell-egg equivalent, up from 4.3 in 1992. Imports are expected to decline in 1994 to 4.5 million dozen, due to lower domestic prices.

### Milkfat Markets Remain Tight

Seasonally rising fluid milk sales and higher levels of fat in milk during the fourth quarter typically result in large amounts of residual cream. Despite the large amounts of residual cream expected this fall, butter purchases by the Commodity Credit Corporation (CCC) under the price support program for milk are expected to be relatively small until almost yearend.

Strong commercial butter sales this year, earlier sales to the CCC in anticipation of a July 7 decline in the support purchase price, and relatively lower butter output have combined to keep commercial stocks small.

Since July, the surplus of milkfat has been running below the surplus of skim solids—narrowing the difference between the two on an annual basis. This surplus adjustment is expected to con-

tinue for the remainder of 1993 as milkfat markets remain tight. Consequently, butter production for the rest of 1993 will be used mostly to meet commercial needs and for building commercial stocks, but not for CCC purchases. As the fat content in milk increases seasonally during the winter, sizable CCC butter purchases are expected again. On the other hand, nonfat dry milk supplies will likely continue to rise above year-earlier levels.

- As of September 1, 1993, 19 million pounds of butter were in commercial storage, down from 33 million pounds a year earlier. Nonfat dry milk stocks, on the other hand, reached 133 million pounds, up from 114 million pounds a year earlier.
- The CCC began to sell butter back to the commercial trade in July. By the end of September, the CCC had sold back more than 30 million pounds.
- The CCC made its first support purchase of nonfat dry milk since September 1992 during the week of July 19-23 following the July 7 increase in the purchase price. The support purchase price was rising relative to butter's, and the ample supplies created were too large to be cleared by the Dairy Export Incentive Program (DEIP).
- Since early 1989, the support purchase price of butter has been cut almost in half, while the support purchase price of nonfat dry milk has been increased by 31 percent.

#### For further information, contact:

Agnes Perez and Richard Stillman, coordinators; Steve Reed, cattle; Leland Southard, hogs; Lee Christensen, Larry Witucki, and Milton Madison, poultry; Jim Miller and Sara Short, dairy. All are at (202) 219-1285. [AO](#)

## Specialty Crops Overview

*The outlook is mixed for citrus, nuts, and vegetables in 1993/94, and sugar production is expected to decline. U.S. orange production is forecast lower in 1993/94 than a season earlier due to smaller crops in Florida and California, and prices are expected higher. Lower production and higher prices are also expected in the lemon market, and Florida production of grapefruit is below a season earlier. Bumper crops of pecans, hazelnuts, and walnuts are expected in 1993/94, but production of almonds—the largest U.S. nut crop—is lower.*

*Processed tomato output—primarily for canning—is up, but production of green peas, snap beans, and sweet corn for processing is expected lower with shortfalls in the Midwest. Domestic sugar production prospects declined slightly during the summer with lower output forecast for the upper Midwest.*

### Citrus Output Lower in 1993/94

U.S. all-orange production for 1993/94 is forecast lower than a season earlier due mostly to smaller crops of Florida's early and midseason oranges and its Valencia oranges. Prices for fresh oranges this winter are expected higher than in 1992/93, due to the smaller navel orange crop in California, the major domestic supplier for the fresh market. Prices for processing oranges also are expected higher, due to Florida's smaller crop and lower output expected in Brazil. The state of Sao Paulo, in Brazil, is the world's largest producer of orange juice for export, and Florida is the primary domestic supplier of oranges for juice.

- The U.S. all-orange output in 1993/94 is forecast at 10.3 million short tons, down 7 percent from last year but 15 percent higher than in 1991/92. Florida's output is forecast

at 172 million boxes, down 8 percent from 1992/93. California's output, at 65 million boxes, is down 6 percent.

- The smaller navel orange crop in California is expected to nudge fresh orange prices higher this winter than a year ago. Retail prices are expected marginally higher.
- The smaller 1993/94 orange crop in Florida and prospects for a lighter 1993 crop in Sao Paulo, Brazil are likely to strengthen prices for orange juice and oranges used for juice.
- Florida's biannual citrus tree count indicates that Florida's orange output will expand in future years as production increases from trees planted in the late 1980's. A major killing freeze or other disaster could interrupt this trend, but new citrus groves have been planted farther south to reduce chances for damage due to cold temperatures.

U.S. all-grapefruit production also is expected lower in 1993/94, due to a smaller crop in Florida. Despite the smaller crop, grower and retail prices for fresh grapefruit are expected near 1992/93 prices because of variable quality in Florida and increased output in Texas. California lemon output is down marginally, and prices are expected about the same as last season.

- U.S. grapefruit output is forecast 9 percent lower than in 1992/93. Florida production is forecast at 2.1 million tons, down 11 percent, with declines in both the white and colored seedless varieties. Output from California's desert area is unchanged from last season. USDA's first forecast for grapefruit production from other areas in California will be issued in April 1994.
- Texas is expected to produce 108,000 tons of grapefruit in 1993/94, up from 75,000 tons in

1992/93. The Texas grapefruit industry continues to recover from the December 1989 freeze, which destroyed most of its trees. Texas produced as much as 550,000 tons of grapefruit in the early 1980's, mostly for the fresh market.

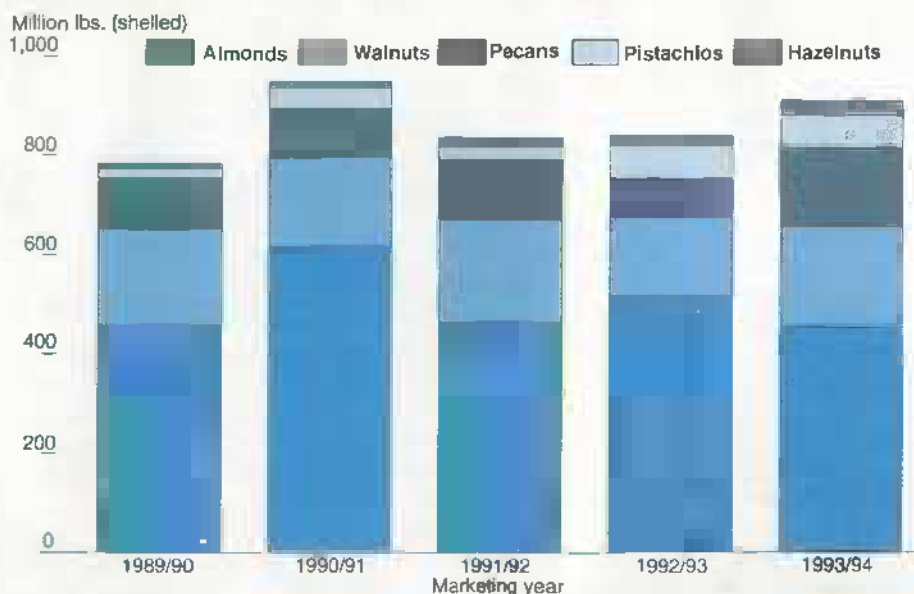
- Lemon production in California and Arizona, where most of the U.S. crop is grown, is forecast to drop 1 percent from a year earlier in 1993/94. Quality of the new crop is reported good.

### Larger Supplies Of Most Tree Nuts

Bumper crops of pecans, hazelnuts, and walnuts are expected in 1993/94, but almond production is forecast to be smaller. Good quality and smaller supply for almonds is expected to result in higher grower prices. Abundant walnut supplies and larger pecan crop prospects, however, are likely to dampen grower prices for these nuts. Most nut trees tend to bear large and small crops in alternate years, and part of the production changes in 1993/94 reflect this cycle.

- Almond production in California is estimated at 470 million pounds, (shelled basis), down 14 percent from 1992. Marketable production, less than total production because of cullage, is forecast down 12 percent. Supply is forecast down 11 percent from a year earlier, because of the lower production and a 15-million-pound drop in carryover stocks. The smaller supply and anticipation of continued strong demand will likely boost 1993/94 almond prices.
- California's 1993 walnut production is forecast at 250,000 tons (in-shell basis), up 23 percent from the previous year, but 3 percent less than the record 1991 crop. Prices are expected slightly lower than last year because of a likely 7-percent-larger supply.
- U.S. pecan production is forecast to be a record 379 million pounds (in-shell basis), up 128 percent from the very small 1992 crop. Larger 1993/94 supplies, up 39 percent from the previous year, will dampen grower prices.

Almonds Account for About Half of U.S. Tree Nut Production



1993/94 preliminary.

Season begins July 1 for almonds, hazelnuts, and pecans; August 1 for walnuts; and September 1 for pistachios. Total production less inedibles and noncommercial usage.

## Agricultural Economy

### Japan Ponders Importing U.S. Apples

Although Japan liberalized its import quotas on apples in 1971, it has completely banned the importation of U.S. apples for phytosanitary reasons. On September 23, 1993, Japan agreed to a procedure which could result in the importation of U.S. apples, beginning as early as January 1, 1995, if certain phytosanitary conditions are met.

Apples are the second leading fruit consumed in Japan, after oranges. Total per capita fresh fruit consumption in Japan was 37.3 kilograms in 1990, with oranges and apples each accounting for about 20 percent of the total. Per capita apple consumption in Japan, 8 to 8.5 kilograms annually, has remained steady since the late 1980's.

Apples are considered a luxury good by the Japanese, who pay as much as \$5 apiece for them. Apples must be blemish-free and are sold individually wrapped. Apples are often given as gifts, and sometimes an entire family shares just one apple for dessert.

Nearly 100,000 growers in Japan produce over 1 million tons of apples annually on about 50,000 hectares. The U.S. produces about 5 million tons a year. The popular Fuji variety accounts for about 50 percent of Japanese apple production.

Production costs in Japan are much higher than in the U.S. for several reasons. First, the bulk of apple production in Japan is labor intensive: Each apple is typically covered with a succession of individual paper bags while growing, to ensure they are blemish free. Second, labor, fuel, machinery, and land costs are much higher in Japan than in the U.S. Producer and retail prices reflect Japan's high cost of production.

The Japanese government provides relatively little support to apple growers compared with support to grain producers. However, the central and prefectural governments, in partnership with shipping organizations, provide funding for a price stabilization scheme whereby apple producers receive a subsidy equal to the difference between the market price and the guaranteed price.

In addition, to encourage greater number of trees, the government provides subsidies for purchasing both production machinery and sorting and packing equipment, and subsidies for planting new dwarf varieties.

Almost 100 percent of Japan's apple consumption is produced domestically. Strict import standards have prevented the entry of foreign apples except for about 100 tons imported annually from South Korea. Japan wants apple imports to be free from diseases and insects that could infect its orchards. South Korea, a small apple exporter accounting for less than 1 percent of world exports, meets Japan's standards.

New Zealand, accounting for 5 percent of world apple exports, will be the first large exporter allowed to supply apples to Japan. On June 1, 1993, Japan granted permission to New Zealand because it succeeded in meeting Japan's import standards and agreed to import Japanese apples. New Zealand's growing season is opposite Japan's, so its apples will not compete directly with the Japanese harvest. New Zealand is expected to export 3,000 tons of apples to Japan in 1994.

The U.S., the largest apple exporter after France, could be the second large player to enter the Japanese market, exporting Golden Delicious and Red Delicious varieties from Washington State and Oregon. Total U.S. exports average 400,000 tons annually, accounting for about 10 percent of world exports.

### *Gauging the Impact*

Industry sources estimate that U.S. exports to Japan would be about 13,000 tons annually in the first few years but could be greater in later years. Preliminary estimates indicate U.S. apple exports to Japan could eventually reach almost 50,000 tons annually, with a market share of nearly 5 percent.

The ultimate impact of lifting the effective ban on U.S. apple imports will depend on the degree of substitutability between U.S. and Japanese apples in consumer markets. The more Japanese consumers view U.S. apples as substitutes for Japanese apples, the larger the total impact of lifting the import ban will be. Quality and consumer preference will be the determining factors in the degree of substitutability between U.S. and Japanese apples.

If Japanese consumers view U.S. apples as near-perfect substitutes for Japanese apples, the primary effect of lifting the import ban will be lower consumer prices in Japan. A study by the Washington State Apple Commission estimates U.S. apples produced for Japanese specifications and going through the same distribution channel as Japanese apples would sell for about half the retail price of Japanese apples.

Strict import standards and supply controls support high producer and consumer apple prices in Japan. When the effective ban is lifted, total supply will increase, putting downward pressure on prices.

At first the price effect would be minimal, as U.S. apple exports would account for only 1.3 percent of the market. But as imports grow and the market share of U.S. apples increases, retail prices should decline. Much depends on how open the Japanese are willing to let the market become and the degree of substitutability of U.S. and Japanese apples.

Both U.S. producers and Japanese consumers would benefit from eased restrictions. A lifting of the import ban by Japan is estimated to increase U.S. apple exports \$20 million annually in the first few years and nearly \$75 million in 4 to 5 years. Meanwhile, Japanese consumers would also benefit from lower retail prices.

However, entry of U.S. apples could have a number of negative effects on Japanese growers. With the importation of U.S. apples, Japan's growers would face competition from lower cost producers. If competition lowers the retail price, as expected, Japanese apple growers could experience losses due to lower prices and smaller market share. And the losses would be greater depending on the extent to which U.S. apples are accepted as substitutes for Japanese apples.

In response, Japanese grower organizations have protested entry of U.S. apples. Furthermore, the entry of lower priced apples could undermine the price stabilization program for Japan's apples. The subsidy is the difference between the guaranteed price and the market price. If increased competition from U.S. apples lowers the market price, the level of subsidy would be larger.

However, if distinct quality differences between U.S. and Japanese apples exist, it is possible that little substitution will occur between them. Instead of being perceived as a luxury item eaten occasionally like Japanese apples, U.S. apples would be viewed as everyday snacks and lunch-box fare. In this case, lifting the import ban would have relatively little effect on Japanese apple prices and grower incomes. In fact, the entrance of lower priced U.S. apples into Japan could stimulate greater consumer interest in apples in general.

Over the last decade, the U.S. has cooperated with Japan to address its phytosanitary concerns. To protect its own orchards, Japan has insisted that American fruit be free of certain insects and disease organisms. Japan's specific concerns over importing U.S. apples are the control of codling moth, plum curculio diseases, and lesser apple worm, and prevention of the introduction of the fire blight bacteria.

Japan has specified standards for the U.S. to meet concerning phytosanitary pests and disease problems, but ambiguity on standards for orchard procedures, fumigation, and cold storage treatment still exist.

Orchard procedures are concerned with such issues as treatment for fire blight. The Japanese want U.S. orchards growing for export to Japan to be free from fire blight hosts, which include pear trees, rose bushes, and grape vineyards. Fumigation will help treat for plum curculio.

To eliminate the threat of codling moth and lesser apple worm being transmitted to Japan, fruit will be treated by a combination of exposure to cold temperatures and methyl bromide fumigation treatment. Apples will be dipped in a chlorine solution before packing to control the bacteria causing fire blight. Because plum curculio is not found in the Pacific Northwest, no treatment will be required for this pest.

U.S. representatives have met several times with Japanese officials to address these concerns, but have failed to reach final agreement on required treatments and procedures.  
[Liana Neff (202) 219-0610]

Labor Is Largest Expense for Japanese Apple Growers

Cost category	Japanese "Fuji" apples <sup>1</sup>	U.S. Red Delicious <sup>2</sup>
\$/100 kg		
Variable cost:		
Labor	56.24	7.03
Nonlabor	30.23	9.81
Total variable cost	86.47	16.84
Fixed cost	15.30	13.84
Total cost of production	101.77	30.68
Wholesale price	266.00	56.00
Retail price <sup>3</sup>	637.00	190.00

<sup>1</sup> Japanese costs are for 1990. \$1 = 134.4 yen. <sup>2</sup> U.S. 1990 costs are estimated from 1987 and 1992 data. <sup>3</sup> All price data are for December 1991.

Sources: Ministry of Agriculture, Forestry, and Fisheries, Japan; College of Agriculture and Home Economics, Washington State University.

## Agricultural Economy

### For Now, Sugar Marketing Allotments Not Slated in 1994

On September 30, USDA announced that it will not impose marketing allotments at this time on domestic sugar processors for fiscal 1994. Sugar allotments had been in place for fiscal 1993 (October 1, 1992-September 30, 1993), meaning that each sugar processor was given a specific limit on sales for the year.

U.S. sugar policy objectives include supporting domestic sugarcane and sugarbeet prices at or above specified minimum levels, and assuring traditional foreign suppliers a minimum share of the U.S. market. The price of sugar in the U.S. is supported by a tariff-rate quota on sugar imports and, if necessary, limits on marketings of domestic sugar.

Sugar processors can obtain nonrecourse loans from the Commodity Credit Corporation (CCC) using sugar as collateral. If the market price of sugar is not high enough to enable a processor to pay off the loan (with interest and other miscellaneous expenses), the processor can forfeit the sugar to the CCC. The law requires the government to use all available means to keep sugar prices high enough so that processors do not forfeit sugar.

During the 1980's, domestic sugar production rose, and sugar imports declined. In order to guarantee a minimum level of imports, Congress included provisions in the 1990 Farm Act requiring the Secretary of Agriculture to impose allotments (limits) on marketing of domestic sugar if estimated imports for domestic consumption fell below 1.25 million short tons, raw value.

In fiscal 1993, U.S. sugar production rose to a record 7.78 million short tons, raw value, and U.S. sugar prices fell to levels at which processors might forfeit sugar to the CCC. In May, USDA extended the tariff-rate quota on sugar imports from a 1-year to a 2-year period—October 1, 1992 to September 30, 1994—and effectively reduced imports. Even with this action, the large amount of sugar in the domestic market was depressing prices to a level where processors were likely to forfeit sugar. Then on June 30, 1993, USDA announced the imposition of domestic marketing allotments for fiscal 1993, marking the first time since the Sugar Act expired in 1974 that government controls have existed on the marketing

of domestic sugar. After allotments were announced, Midwest beet sugar prices jumped about 4 cents to about 27.5 cents a pound (f.o.b. factory). Raw cane sugar prices rose by a smaller amount, from about 21.5 cents a pound to about 22 cents.

Since some beet processors had already marketed virtually their entire annual allotment, customers were forced to look for suppliers who were not yet above their limit. Some sugar that had been sold on forward contract was declared *force majeure*, effectively cancelling the contract. In order to allow domestic cane sugar supplies to reach the market, USDA in July and September announced reallocations of cane sugar allotments from states with excess allotment levels to states with excess cane sugar. The law specifically excludes reallocations between beet and cane sugar.

The formula for determining each processor's allocation of the allotment is based upon three factors: past marketings, processing capacity, and ability to market. Once the overall allotment quantity for domestic sugar is calculated, it is divided between the two sectors, cane sugar and beet sugar. The beet sugar allotment is then divided among the beet sugar processing companies. The cane sugar allotment is first divided among the five producing states (Hawaii, Florida, Louisiana, Puerto Rico and Texas), and then among the cane sugar processors within each state.

In July, four sugarbeet processors filed a lawsuit against USDA, claiming that the imposition of allotments was not within the legal limits of the statute. The case is still pending.

Before the beginning of each quarter of the fiscal year, USDA must determine whether or not marketing allotments will be established, suspended, or adjusted. If estimated imports, based upon a statutory formula, are greater than or equal to 1.25 million tons, marketing allotments are not triggered, or (if in place) are suspended. This calculation of estimated imports is not the same as actual forecasts of sugar imports. For now, marketing allotments are not slated for fiscal 1994. The next quarterly determination on whether or not to impose allotments for fiscal 1994 will be made before January 1, 1994.

[Ron Lord (202) 219-0886]

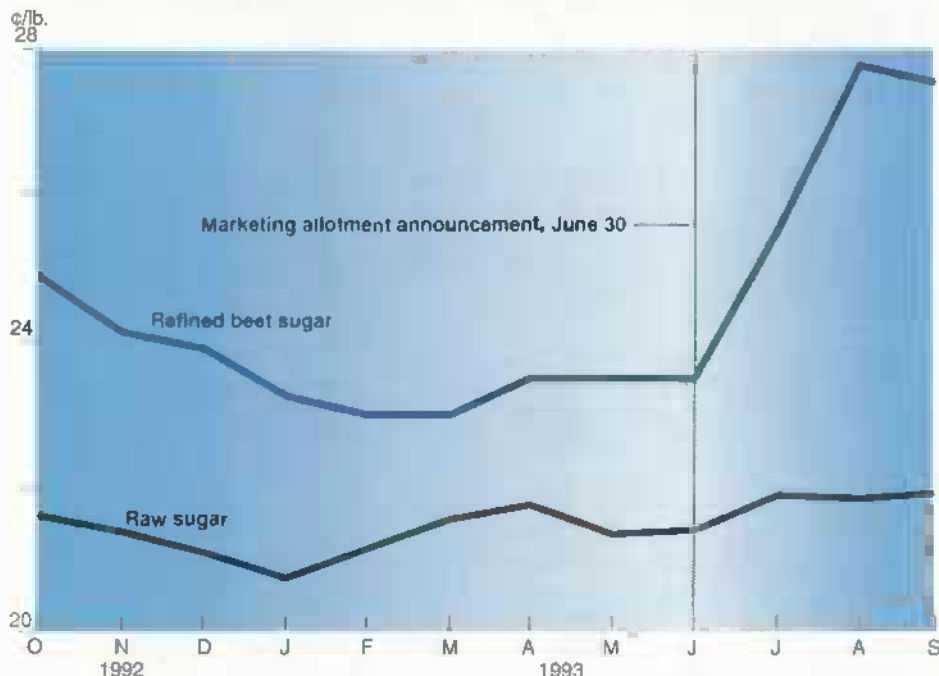
- Hazelnut (filbert) production is forecast 41 percent higher than in 1992. Total supply is also expected up because of the larger crop, and grower prices are likely to slip below 1992 earnings. U.S. hazelnut production

has been increasing in recent years, putting downward pressure on grower prices.

- Pistachio production was expected lower than the record 1992 crop because pistachios are in the low year of their alternate production cycle.

However, the California Pistachio Commission's first forecast indicates a 1993 crop slightly larger than last year. Favorable weather during the spring and summer, as well as more trees achieving mature yields, are likely reasons.

### Beet Sugar Prices Rose Sharply After Marketing Allotments Were Announced



### Outlook Mixed for Processed Vegetables

An increase in processing tomato output more than offset production declines in green peas, snap beans, and sweet corn, resulting in higher processing vegetable production in 1993. Retail prices for processed vegetables in August were higher than a year earlier, due in part to production shortfalls in the Midwest for canned vegetables. Storage onion production for the fresh market is down marginally, and prices are expected near last year's. However, storage onion production for processing is up.

- Green pea, snap bean, and sweet corn crops for processing were down 7, 18, and 35 percent in 1993, reflecting reduced output in the Midwest due to excessive rains and flooding. Processors' list prices in early October were 5 to 10 percent higher than a year earlier for most items.

- Tomato growers boosted production for processing by 12 percent from a year earlier. Production in California, which accounts for over 90 percent of U.S. output, was up 14 percent. Despite 1993's larger crop, prices for tomato products are expected higher than in 1992 because of smaller carryover stocks. In 1992, excessive carryover stocks depressed processed tomato prices.
- Storage onion production (excluding California's) is estimated at 31.4 million cwt in 1993, down 1 percent from the year before. Shipping point prices for fresh onions during September averaged 7 percent higher than a year earlier.
- Onion production in California, where storage onions are used primarily for processing, is forecast 12 percent higher than in 1992.

### Sugar Output Revised Downward

Domestic sugar production prospects for fiscal 1993/94 declined during the summer due to a lower forecast for sugarbeet output in the Midwest and Idaho, and cane sugar output in Louisiana. Sugar prices strengthened during the third quarter, following implementation of domestic sugar marketing allotments.

An increase in prices followed a June 30, 1993 announcement of domestic marketing allotments for fiscal 1993. The allotments largely affected beet sugar marketings, resulting in a stronger price reaction on beet sugar prices than on cane sugar prices.

- The October estimate of U.S. domestic sugar production for 1993/94 was 140,000 tons less than the June estimate. Excessive rains and flooding reduced sugarbeet yield prospects in the Red River Valley. Dry weather diminished cane yields in Louisiana, while cane sugar production in Hawaii slightly exceeded earlier expectations.
- The October estimate of U.S. sugar use in fiscal 1993/94, 9.2 million tons, is unchanged from the June estimate but 1.9 percent higher than 1992/93.
- Domestic wholesale beet sugar prices averaged 26.9 cents a pound during July, August, and September, up 14 percent from the second quarter. Raw sugar averaged 21.9 cents a pound during the third quarter, up nearly 2 percent over a quarter earlier.

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## Commodity Spotlight



## Sweetpotato Consumption Beyond the Holiday Niche

**S**weetpotatoes are among the New World foods that Americans celebrate each year on Thanksgiving, and shipments rise predictably every November as the holiday approaches. Sweetpotatoes are served during other holiday celebrations as well, but this highly nutritious root vegetable is generally not a mainstay in the American diet.

Demographic produce surveys show that the sweetpotato has remained most popular in the South. Almost 40 percent of survey respondents in the South indicate they have purchased sweetpotatoes or yams during the last 12 months, nearly twice as many as in any other U.S. region. Survey respondents who had purchased sweetpotatoes or yams were also more likely to be over 60 and to have higher household income.

Following World War II, per capita use of sweetpotatoes began a slow downward trend which lasted through the early 1980's, and then stabilized at about 4.3 pounds per person. While consumption

of sweetpotatoes is far lower than for major vegetables such as potatoes and tomatoes, its use is about even with green peas, bell peppers, and mushrooms, and surpasses asparagus, cauliflower, and many minor and specialty vegetables.

Based on production and use data, it appears that U.S. sweetpotato demand may have bottomed out during the last few years. Industry associations in North Carolina and other producing states continue making substantial efforts to promote sweetpotatoes. These efforts may have been partly responsible for stemming the long-term decline in per capita use.

U.S. imports of sweetpotatoes account for about 1 percent of supply, but most of this volume moves from the Dominican Republic and other Caribbean countries to Puerto Rico—and few imports land on the continental U.S. Exports also are small, with less than 2 percent of total supply being marketed outside the country, mostly to Canada. Export sales totaled \$4.6 million in 1992, while imports were valued at \$1.7 million.

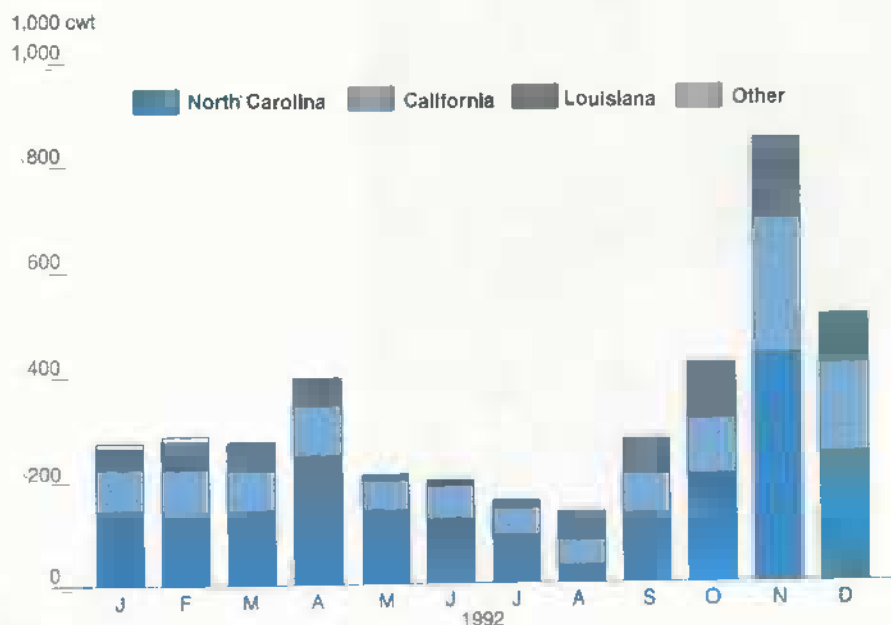
Sweetpotato consumption could rise as baby boomers age (older Americans consume more produce), and as consumers become more sophisticated about nutrition. In addition, rapid expansion is expected in the coming decade in the Hispanic markets in New York and other large cities, where sweetpotatoes are sold frequently.

### Output Concentrated In the Southern Tier

U.S. growers harvested 82,000 acres and produced 1.2 billion pounds of sweetpotatoes in 1992. Farm cash receipts from the sale of sweetpotatoes totaled \$161 million in 1992.

Commercial sweetpotato production is concentrated in 11 states, mostly in the South. About 15 other states produce a small amount of sweetpotatoes, primarily for local markets. Over 3,000 U.S. farms produced sweetpotatoes in 1987, the most recent year of available Census of Agriculture data.

Sweetpotato Consumption Peaks at Thanksgiving



1992 shipment data.

## The Sweetpotato's Southern Roots

Native Americans were growing sweetpotatoes in present-day Georgia when the English first settled there, and sweetpotatoes were among the few foods available to the early Georgia settlers. Columbus observed sweetpotatoes during his expeditions to the West Indies, while DeSoto later found them growing in what is now Louisiana.

Most botanists believe that sweetpotatoes originated in tropical America, based on genetic evidence. The Incas of South America and Mayas of Central America grew several varieties—one for food and others for coloring materials to use in paints. Sweetpotato seed roots were likely carried to the Philippines and East Indies by Spanish explorers, and then to India and China by the Portuguese. Sweetpotatoes do not thrive in cool weather, and never became popular in Europe, even in the warmer regions of the Mediterranean.

Sweetpotatoes (*Ipomoea batatas*) are a member of the morning glory family. The two basic types of sweetpotatoes are those with moist flesh that is soft when cooked, and with dry flesh that is firm when cooked. Moist flesh types are commonly grown and used in the Southern states, and dry flesh types fare better in the Northeast and Middle Atlantic states.

Sweetpotatoes are often confused with yams, which are similar in appearance and use to the moist type of sweetpotato. But yams belong to a different plant family of Asian or African origin, and are grown in tropical climates. In the U.S., true yams are grown only at the tip of south Florida.

Important sweetpotato cultivars include the following:

**Jewel.** High-quality moist-type sweetpotatoes with deep orange-colored flesh and bright copper-colored skin; high

yielding and good for long-term storage; account for the majority of commercially produced sweet potatoes.

**Centennial.** Medium to large moist-type sweetpotatoes with bright orange skin and deep orange flesh; often grown in home gardens.

**Southern Delite.** A new insect- and disease-resistant USDA cultivar with medium-sized tubers, orange flesh, and good flavor and baking properties; moist-type; may control insects and disease better than pesticides.

**Georgia Jet.** Large, uniformly sized moist-type sweetpotatoes with reddish-purple skin and orange flesh; popular with small farmers.

**Yellow Jersey.** Dry-type cultivar with orange skin and dry, sweet yellow flesh; does well in the Northeast and Middle Atlantic states.

**Boniato.** Also called Cuban Sweet Potato; dry-type, short, plump, and irregularly shaped with reddish skin and white flesh; available in Hispanic markets in New York and other large cities.

**Beauregard.** A dry-type cultivar with light-rose skin and firm light- to deep-orange flesh; popular in parts of Louisiana; is high-yielding, disease-resistant and excellent for baking.

**Garnet.** A moist-type cultivar available throughout the season in California; has purple or deep-red skin and soft deep-orange flesh.

North Carolina, Louisiana, and California are the top three producing states, accounting for about 70 percent of the U.S. crop. Alabama and Texas round out the top five states. While harvested acreage has been declining steadily in the U.S. since 1944, the downward spiral in production has slowed since 1970 and remained relatively stable since 1980 due to rising per-acre yields.

In the production of sweetpotatoes, as well as tobacco and turkeys, North Carolina ranks first in the U.S., producing about a third of the sweetpotato crop. Most of the crop is produced in the western part of the coastal plains, with Johnston, Nash, Wilson, and Columbus Counties accounting for over half.

Sweetpotatoes are produced on about 1,000 farms in North Carolina. The state's larger farms make most of the sweetpotato sales. About 27 percent of North Carolina's farms that grow sweetpotatoes had \$100,000 or more in agricultural sales, and these farms accounted for 83 percent of sweetpotato sales.

Approximately two-thirds of the state's output is sold in the fresh market, and the remainder is processed (largely canned) or used as seed. But North Carolina also markets fresh sweetpotatoes throughout the eastern and central parts of the country, the largest volume moving to New York, Baltimore, and Chicago.

Louisiana is the second leading producer of sweetpotatoes, and accounts for about a fourth of the U.S. crop. From 1943 to 1969, Louisiana was the leading sweetpotato state. While acreage has been trending up in other leading sweetpotato states, Louisiana acreage is now less than half of its 1970 area, although production has been maintained by rising per-acre yields.

Sweetpotatoes are produced on about 200 farms in Louisiana, mostly in the Evangeline, Avoyelles, and St. Landry parishes. Over two-thirds of output is used for processing, largely canning. Major fresh markets for Louisiana are Chicago and Detroit.

## Commodity Spotlight

### School Lunch Program To Offer More Fresh Produce

Schoolchildren who participate in USDA's National School Lunch Program (NSLP) are finding more fresh fruits and vegetables on the cafeteria menu this year. USDA is planning to double the amount of fresh fruits and vegetables offered to schools from last year's total distribution of 8.8 million pounds. The action is intended to increase fresh fruit and vegetable consumption by schoolchildren and is part of USDA's long-term nutrition initiative to improve children's health and eating habits.

In the past, produce purchased for the NSLP included fresh apples, pears, grapefruits, oranges, tomatoes, and baking potatoes. Larger quantities of these items, as well as more types of produce, will now be offered, and may include carrot and celery sticks, and other pre-cut vegetables.

The NSLP is a federally assisted meal program that provides balanced lunches, low-cost or free, to about 25 million children each school day. The lunch program is usually administered by the state education agency, which operates the program through agreements with local school districts. About 59 percent of all public school children participate in the lunch program.

Popular items requested by state agencies include meats (29 percent of total commodity deliveries in the 1991/92 school year), dairy products (10 percent), grain products (21 percent), and processed fruits and vegetables (32 percent). Fresh fruit and vegetable purchases accounted for less than 1 percent of the commodities delivered for the NSLP. States have purchased only minor amounts of fresh produce for the NSLP because of problems associated with distribution of fresh fruits and vegetables.

USDA's Agricultural Marketing Service facilitates purchase from firms that deliver commodities to central points in each state. Produce is then distributed to local schools. Produce quality can deteriorate along the distribution path, leading to product spoilage and loss. Also, once the produce reaches the school, lack of proper storage facilities can reduce quality if the food is not immediately served.

One way to address this problem is for USDA to encourage the purchase of fresh produce on the local market. USDA commodities represent approximately 20 percent of the food served in the NSLP. Therefore, 80 percent of the food is purchased locally, and USDA will support local schools with buying information and training in storage and handling techniques. USDA has begun two series of public hearings this fall to discuss additional ideas on improving the nutritional content of the school meal programs.

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California, with acreage just one-fourth of North Carolina's, has the highest yields in the industry, making it the third leading producer of sweetpotatoes. California grows sweetpotatoes mostly for the fresh market, and accounts for about 15 percent of the U.S. crop. Three-fourths of the production is on large farms in the Livingston/Atwater region

of Merced County. Major fresh markets for California growers are Los Angeles, San Francisco, and Seattle.

Worldwide, the U.S. ranks only 10th among sweetpotato producers. China produces 85 percent of the world's crop, followed by Indonesia (2 percent), Vietnam (2 percent), and Uganda (1 percent).

China's crop is used for food, and is also an important source of animal feed. In many countries, the leaves and shoots of the sweetpotato plant are also used for food.

### Nutritional Quality Is Key to Expansion

Sweetpotatoes are available year-round because, after curing, they can be stored up to about 7 months. Harvest periods vary by state but run from mid-June to mid-November. Sweetpotatoes are either immediately marketed, or cured and placed in storage. High-quality fresh-market sweetpotatoes can command grower prices as much as four times as high as processing-grade product.

Unlike many other commodities, sweetpotatoes do not have their strongest market volume during and just after harvest. About 45 percent of fresh sweetpotato shipments appear to be tied to holiday celebrations. Sweetpotato shipments are strongest during:

- November, just prior to Thanksgiving, with about 22 percent of fresh volume moved;
- December, with about 13 percent of fresh shipments in anticipation of the Christmas and Hanukkah holidays;
- March or April (depending on when Easter falls), with about 10 percent of fresh shipments; and
- October, with seasonal prices at harvest-time lows and some volume being moved in anticipation of Thanksgiving—about 10 percent of fresh shipments.

Sweetpotatoes are one of the most nutritious foods available, and are rich in vitamins, especially vitamin C, beta carotene (which the body converts into vitamin A), and minerals. One sweetpotato provides twice the RDA for vitamin A and about half the required vitamin C. Sweetpotatoes are low in fat and calories and have no cholesterol.

## Commodity Spotlight

## World Agriculture &amp; Trade

On average, approximately three-quarters of the U.S. sweetpotato crop is sold for food uses. Nonfood uses include seed (8 to 10 percent), animal feed (10 to 12 percent), and farm household use (2 to 3 percent). About a quarter of the sweetpotato crop sold for food uses is canned, about 6 percent is frozen, and 2 to 3 percent is dehydrated—leaving about two-thirds of the sweetpotato crop for the fresh market.

Processed sweetpotato products take many forms—frozen whole, sliced, diced, candied, and french fried sweetpotatoes; dehydrated flakes; and canned products such as twice-baked, pattied, ripple-sliced, candied (in syrup), mashed, baby food, and pie fillings. Sweetpotatoes are also used to make bread products, custards, cookies, and cakes. Among the newer processed product forms are sweetpotato chips and french fries.

Price and income support programs do not cover sweetpotatoes, but USDA has regularly purchased canned sweetpotato products for use in the school lunch and other feeding programs. During the 1992/93 crop year, USDA purchased the fresh-weight equivalent of about 11 million pounds of canned sweetpotatoes. This represented about 6 percent of the estimated total U.S. pack of canned sweetpotatoes and 1 percent of overall U.S. production.

USDA has generally not purchased any fresh, frozen, or dehydrated sweetpotatoes for its school lunch and other feeding programs. However, USDA has recently announced its intention to double purchases of fresh produce for the school lunch program.

Increased promotion by sweetpotato industry groups, new government efforts to teach and promote nutrition, and the development of healthful new cuisines may all play a role in expanding the use of sweetpotatoes in the American diet.

[Gary Lucier (202) 219-0886] AO



Courtesy Deutsche Bundesbank

## EC Exchange Rate Bands Widen

The European Community's (EC) new exchange rate system, adopted on August 2, 1993 and establishing less rigid guidelines for currency fluctuations, could have mixed results for U.S.-EC trade. Most EC currencies are now allowed to vary within much wider bands around their central exchange rates than before the change. The new flexibility—permitting individual currencies to appreciate or depreciate by as much as 15 percent from the central rate—effectively brings the EC closer to a floating exchange rate system.

Wider bands for EC exchange rates suggest an impact on U.S. exports that is less favorable in the short term but more favorable in the long term. Because central banks in the EC no longer have to keep currency values within a narrow range by maintaining high nominal interest rates, the interest rates can be allowed to fall.

In the short run, lower interest rates in the EC should weaken EC currencies relative to other currencies such as the

dollar and the yen. In general, this would dampen EC imports and boost its exports. This effect would be somewhat limited because EC agricultural imports and exports are largely insulated from world price movements by variable import taxes and export subsidies.

In the longer term, lower interest rates should ease credit conditions and spur economic growth. The result could hasten recovery of Europe's recession-plagued economies, raising Europe's demand for imports and benefiting the outlook for U.S. exports. The new exchange rate system could also have repercussions for the General Agreement on Tariffs and Trade (GATT) and the EC's Common Agricultural Policy.

## Tight Currency Bands Were Not Sustainable

Since 1979, most EC countries had adhered to the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS), which restricted the exchange rate movements of their currencies within narrow limits against each other (plus or minus 2.25 percent). The German mark usually acted as the anchor currency due to that country's record of low inflation, brought about by tight monetary policies in the 1970's and 1980's. As the mark strengthened in value, the other countries had to adjust their economic and monetary policies to maintain the value of their currencies against the mark.

In the early 1990's, Germany's costs of unification, which entailed massive government spending to shore up the East German economy, caused German interest rates to rise along with price inflation. This made it difficult for the EMS policy of maintaining strong currency values through high interest rates, given the stringent standards of the German monetary authority. Consequently, economic conditions in Europe worsened, leading to double-digit inflation.

By the summer of 1993, despite high nominal interest rates, Germany's real (short-term) interest rates were the lowest in the ERM. Inflation in Germany

## World Agriculture & Trade

### The European Monetary System & the ERM

The European Monetary System (EMS) was established in 1979 to provide a framework for coordinating member countries' central bank operations and national monetary policies. The object was to control the supply of money and to narrow the range of exchange rate variations between member currencies.

Seven EC members—Belgium, Denmark, France, Germany, Ireland, Luxembourg, and the Netherlands—became full participants in the EMS. Italy, Spain, Portugal, and the United Kingdom participated under modified arrangements.

The European Community's movement toward full economic union called for the creation of a reference currency called the European Currency Unit (ECU). The eventual use of the ECU as the EC's universal medium of exchange and standard of value requires, as a first step, maintenance of stable exchange rates between the currencies of the member countries. Presently, the ECU is a composite currency reflecting the sum of weighted individual country currency units, where the weights are determined by each member's share of total EC GNP and intra-EC trade.

The Exchange Rate Mechanism (ERM) was developed as a means to support currency values of member countries and to set limits on exchange rate movements. In its function to reduce exchange rate variability, the ERM specifies the bands, or the upper and lower limits around the ECU's value, within which individual countries' exchange rates are allowed to fluctuate.

These bands were originally set at 2.25 percent and remained at that level (6 percent for Italy, Spain, Portugal, and the U.K.) until August 1993. At that time, they were expanded to 15 percent to ease exchange market pressures and, in effect, permit needed currency realignments.

Ostensibly, the bands were intended to force ERM members to pursue parallel macroeconomic policies—fiscal and monetary—with the goal of attaining a fixed exchange rate structure. This would effectively simulate a single currency, and by implication, result in more uniform inflation rates.

The ERM was supported by the intervention of member central banks in foreign exchange markets. In practice, this arrangement managed changes in exchange rates in accordance with movements in the anchor currency—the Deutschmark. When an exchange rate approached the ceiling or floor of its bands, the ERM would mobilize foreign exchange reserves from the central banks to restore parity.

was high relative to other EC countries due to Germany's large budget deficit. Germany's central bank, the Bundesbank, saw subduing inflation as its major priority, not lowering nominal interest rates even to relieve the pressure on other EC countries.

If anything, German real interest rates needed to rise to subdue domestic inflation. "Exporting" some inflation by devaluing the mark through lower interest

rates was also unacceptable to Germany's central bank because of the mark's role as the ERM's anchor.

The high interest rates needed to prevent currency depreciation caused the EC's terms-of-trade to deteriorate as export competitiveness suffered, particularly for the United Kingdom and Italy. Instead of raising interest rates further to maintain currency values, these two countries opted to break away from the ERM in

September 1992. Britain experienced an economic recovery in the wake of the decrease in interest rates and depreciation of the pound.

Remaining ERM members defended each other's currencies by having their central banks intervene in the foreign exchange market whenever market exchange rates approached their lower or upper parity bounds. The central banks would use foreign exchange reserves to purchase these currencies—until foreign exchange reserves were nearly depleted. Domestically, these purchases increased the money supply, risking higher inflation and thus higher interest rates.

The foreign exchange market correctly sensed that the high real interest rates in these countries were not sustainable. The option of raising interest rates further to stabilize currency values might have discouraged speculation in currency markets; however, no country was willing to sacrifice its domestic economic health for the ERM's sake.

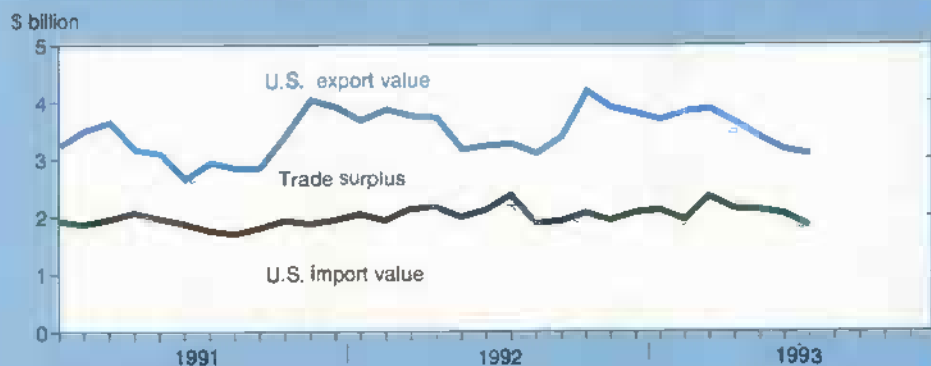
Political pressure to ease the tight monetary and fiscal policies needed to maintain currency values increasingly exposed the ERM to criticism in Europe. In fighting domestic inflation and simultaneously supporting the currencies of its ERM partners, the Bundesbank finally conceded that the two tasks were incompatible—with the latter exacerbating inflation. A protective wall of high interest rates with weak economies as a foundation was not sustainable.

The solution devised was a movement away from effectively fixed exchange rates to requiring less central bank intervention and conferring relatively more monetary independence on member countries. The ERM gave ground in early August 1993 when monetary officials agreed to loosen the restrictions on exchange rates. Currencies within the ERM were allowed to fluctuate plus or minus 15 percent from their previous value.

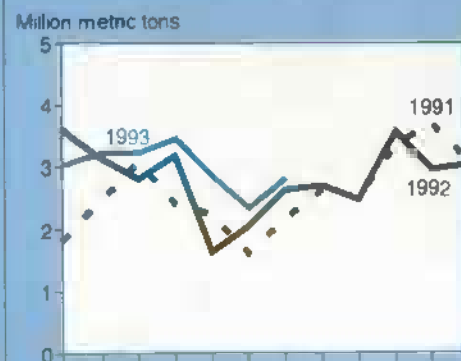
## U.S. Trade Indicators

## World Agriculture &amp; Trade

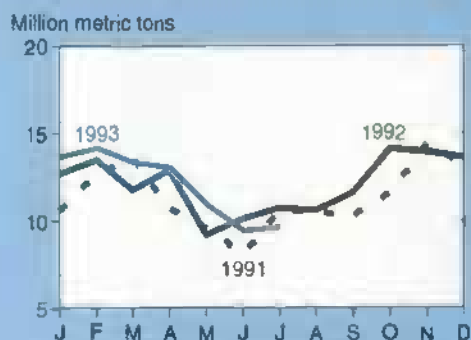
U.S. agricultural trade balance



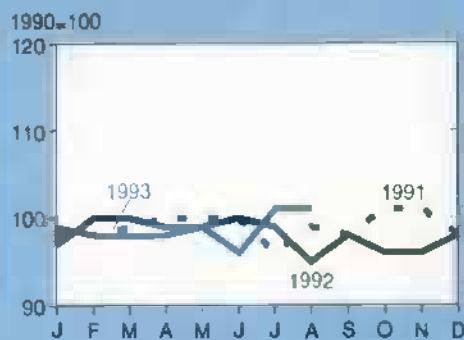
U.S. wheat exports



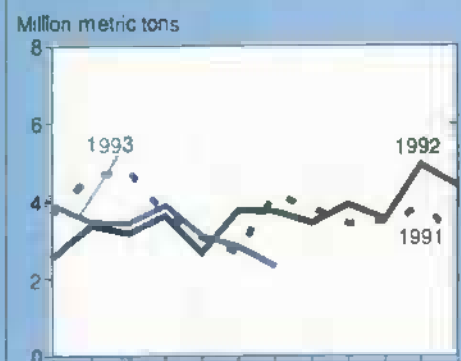
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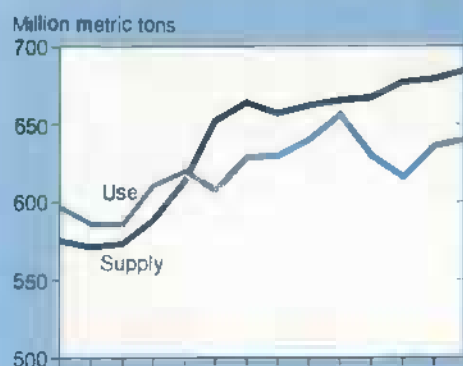
Index of export prices



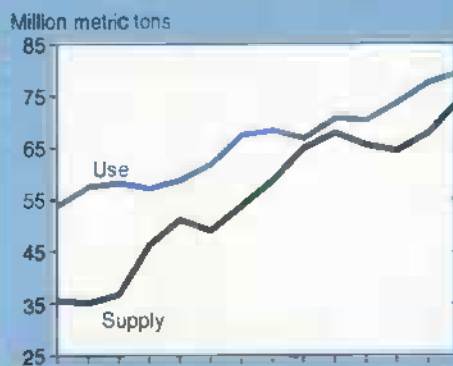
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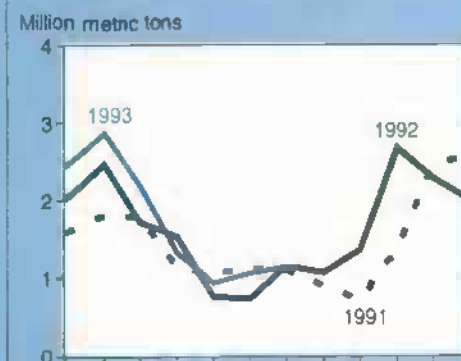
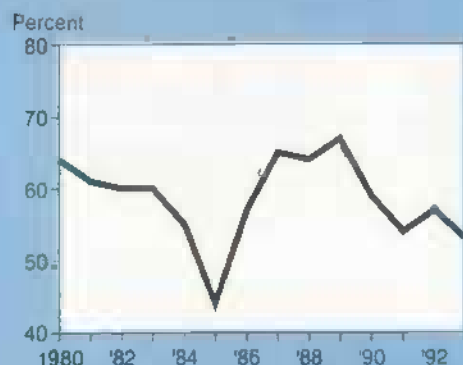
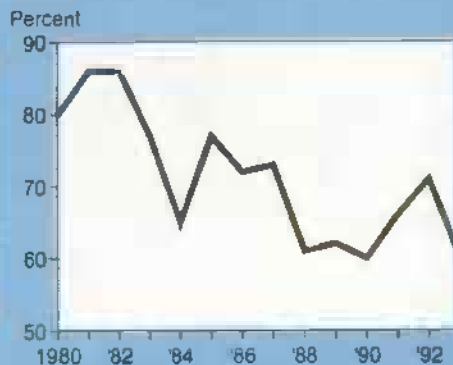
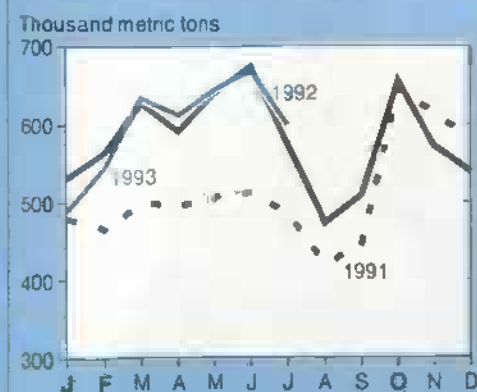
Foreign supply &amp; use of coarse grains



Foreign supply &amp; use of soybeans



U.S. soybean exports

U.S. share of world coarse grains exports<sup>1,2</sup>U.S. share of world soybean exports<sup>1,2</sup>U.S. fruit, nut & vegetable exports<sup>3</sup><sup>1</sup>Excluding intra-EC trade. <sup>2</sup>October-September years. <sup>3</sup>Includes fruit juices.

## World Agriculture & Trade

### *New Strategy Calls for Interest Rates To Fall*

Instead of managing exchange rates by keeping nominal interest rates high and thus leaving little freedom to ease domestic credit conditions, the focus has now shifted to reducing real interest rates. (Real interest rates reflect true economic costs or returns by subtracting the effect of inflation from the nominal rates.) By following the Maastricht Treaty's guidelines for inflation and public spending, differences in inflation rates and inflationary expectations should shrink until real interest rates become more uniform among EC countries.

Attention would then be focused on expected rates of inflation, which would bolster commitment to inflation targets. Monetary union would come about as a result of a convergence in inflation rates. Large exchange rate misalignments would be avoided, reducing the threat of speculative exchange market pressures.

Currency values in terms of actual purchasing power should then accordingly converge, thus achieving real exchange rate parity. At this point the goal of a single currency will have been effectively attained, and by implication, the necessary condition for unified monetary policy among EC countries. But unless and until government monetary policies are coordinated, exchange rate parities will be difficult to sustain.

The recession that engulfed the EC in 1993 should prompt looser monetary policies instead of higher government expenditures in the effort to revive growth. If EC interest rates fall far enough to induce a recovery without igniting inflation, then real interest rates should decrease. And as interest rate differentials between the U.S. and the EC shrink, European currency values should depreciate, enhancing Europe's trade competitiveness vis-a-vis the U.S.

### *Impact on U.S. Trade Will Be Mixed*

The current small U.S. trade surplus with the EC will likely disappear and turn into a deficit in 1-2 years, if not sooner. The two reasons for this turnaround are the appreciation of the dollar against the European currencies that has occurred since the second half of 1992, and the higher relative economic growth in the U.S. compared with the EC, which have caused U.S. imports to rise.

As the dollar appreciated in real and nominal terms in the first half of the 1980's, U.S. trade balances with the major European partners deteriorated after a lag of 1-2 years. U.S. trade deficits with Germany, France, the U.K., and Italy all increased, while trade surpluses with Belgium and the Netherlands shrank.

As the dollar started depreciating sharply in 1986, U.S. trade deficits declined or turned into small surpluses while U.S. trade surpluses rose. And when the dollar appreciated modestly in 1991 against the core currencies of the ERM—those of Germany, France, Belgium and Netherlands—a larger trade deficit with Germany and lower trade surpluses with the other three countries resulted in 1992.

This U.S. trade surplus with the EC is expected to continue diminishing through the end of 1993, especially in light of Europe's current recession. The U.K. and Italy, whose currencies now fluctuate freely, have already improved their domestic economic situations and are moving toward a balanced trade with the U.S. Overall, the U.S. trade position with the EC should deteriorate further in 1994.

Western Europe accounted for 29 percent of U.S. exports of goods and services in 1992. Agriculture now amounts to less than 7 percent of U.S. exports to Western Europe.

The U.S. surplus in agricultural trade with Western Europe has been stable, averaging \$2.5 billion since 1986. Furthermore, increased U.S. exports of high-value agricultural products to Europe have been roughly matched by similar imports from Europe.

Trade statistics since 1980 indicate that stronger economic growth in the U.S. compared with Germany results in a larger U.S. trade deficit as a share of total U.S.-German bilateral trade, with a 2-year lag on average. A rough pattern has evolved in the last dozen years that shows a deterioration of the U.S. trade position following faster U.S. growth vis-a-vis the EC.

The U.S.'s more advanced recovery can help Europe rebound faster from recession only through greater U.S. demand for imports. The current strength of the dollar compared with EC currencies favors EC terms-of-trade over the U.S.

### *European Integration & GATT Could Be Affected*

With respect to the current Uruguay Round of GATT negotiations, more flexible exchange rates in Europe will have a short as well as longer term impact. In the near term, brighter prospects for economic recovery associated with lower interest rates could lessen any perceived disadvantage caused by reduction of trade barriers as specified in current GATT proposals. Thus, instead of a tendency toward protectionism that normally occurs when economic activity falls, the greater freedom of EC monetary authorities to pursue domestic expansion might lead to less apprehension about GATT.

But over the longer term, if Europe's economic integration is jeopardized by less coordinated macroeconomic policies, resulting in wider exchange rate fluctuations, the pursuit of domestic-oriented policies could remove pressures to conform to GATT guidelines.

## The U.S.-EC Trade Balance

Due in part to the U.S. dollar's overall appreciation against EC currencies since September 1992 (the first Exchange Rate Mechanism crisis) and Europe's recession in 1993, the U.S. trade surplus with the EC is shrinking and will likely disappear in 1-2 years.

The U.S. has maintained a combined goods-and-services trade surplus with the EC since 1990. While the U.S. is expected to report an overall trade surplus with the EC in 1993, the nonagricultural merchandise trade balance is projected to be negative. The trade surplus in services will remain positive and contract only slightly.

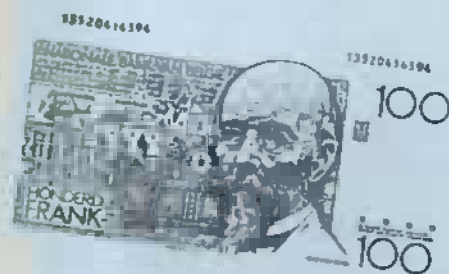
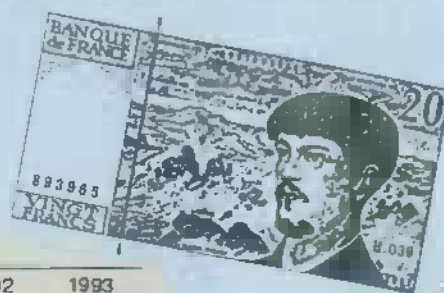
U.S. nonagricultural merchandise exports to the EC have declined steadily as a share of total exports to the EC over the last decade. In contrast, services' share reached a record 38 percent in 1991 and has remained between 35 and 36 percent since 1991.

The growing services trade surplus prevented the overall U.S. trade balance with the EC from sliding further in 1992. Services are expected to keep the 1993, and perhaps the 1994, overall U.S. trade balance positive.

Historical data strongly suggest that import demand for services is less price-sensitive than import demand for merchandise. In addition, EC import demand for agricultural products is less price-responsive than import demand for non-agricultural goods. This is partly due to various policy measures designed to insulate domestic agricultural product prices from world price movements.

The price effect from the recent strength of the dollar, in conjunction with the income effect from weaker EC economies, is expected to pull down nonagricultural merchandise imports from the U.S. more than imports of services or agricultural products.

The last breakdown of the ERM in August 1993, and the expected decline in EC currency values with respect to the dollar, should have a relatively more adverse short-run negative impact on U.S. merchandise exports to the EC than on exports of services or agricultural goods.



Services Gaining Larger Share of U.S. Exports to the EC

	1988	1989	1990	1991	1992	1993
Value:						
	\$ billion					
Goods and services	103.1	122.0	138.8	148.8	155.0	152.7
Trade balance	-15.9	-1.6	2.4	18.3	14.8	7.2
Nonagricultural goods	66.6	77.5	88.9	93.8	92.8	90.4
Trade balance	-15.0	-3.4	2.5	12.9	4.1	-2.9
Services	28.6	37.4	42.6	47.5	54.4	55.2
Trade balance	-4.4	-0.6	-2.5	2.7	8.1	7.2
Agricultural products	7.8	7.0	7.4	7.5	7.8	7.2
Trade balance	3.4	2.4	2.4	2.7	2.6	2.8
Share:						
	Percent					
Nonagricultural goods	64.6	63.5	64.0	63.0	59.9	59.2
Services	27.7	30.7	30.7	31.9	35.0	36.1
Agricultural products	7.8	5.7	5.3	5.0	5.0	4.7

1993 preliminary.

Sources: Survey of Current Business and FATUS.

## World Agriculture & Trade

In addition, the detailed arrangements by which EC member countries finance the EC's Common Agricultural Policy (CAP) will become increasingly complicated if exchange rates float within a wider range. The CAP insulates the EC's agricultural sector from world market competition and price fluctuations in several ways.

One principal device is an import tax (a variable levy) which maintains a constant ratio between domestic and imported prices. This gives "Community preference" to domestic products, making agricultural imports more expensive. A complementary mechanism is an export subsidy which removes surplus supplies and allows production to exceed domestic needs of specified agricultural commodities.

A currency depreciation against the dollar, however, will raise the price of imported food and thus lower the variable import levy. In addition, EC agricultural exports will cost less in dollar terms, thereby reducing variable export subsidies.

For the U.S., lower interest rates in Europe will mean greater short-term capital inflow, given higher relative U.S. investment returns. Long-term interest rates in the U.S. have already fallen, which should pave the way for U.S. expansion. EC economies will subsequently benefit when U.S. demand for imports eventually rises, if U.S. imports have not already risen. This should, in turn, reinforce U.S. economic growth when the EC's demand for imports picks up.

Finally, a narrowing of the U.S.-EC interest-rate differentials should signal more stable exchange rates—a climate normally conducive to greater trade and relatively synchronized economic growth paths.

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## Japan Poised To Import Rice

Japan's virtual ban on rice imports may soon give way, at least temporarily, to the realities of weather and low domestic stocks. USDA estimates that Japan, faced with a poor 1993 rice crop, will import about 1.6 million metric tons of rice by the end of 1994. The expected large imports could tighten U.S. and world supplies over the next year and lead to significantly higher prices.

The impact on world prices is expected to be substantial because Japan's import needs are likely to exceed readily available supplies from the two principal exporters of high-quality japonica: Australia and the U.S. This could trigger a significant price spillover in the long grain (indica-type) markets and in lower quality japonica markets. In addition, rice is a thinly traded commodity that is stratified by type and quality. Small changes in production can generate large swings in trading prices.

### Crop Is Japan's Smallest Since WW II

A poor harvest in 1991 reduced Japan's 1991/92 ending stocks to just 240,000 tons, compared with a normal stock level of over 1 million tons. The government of Japan responded by relaxing its rice area restrictions in 1992 in order to generate a larger crop and replenish stocks. However, 1992's harvest was insufficient to rebuild stocks significantly, leaving Japan with only 431,000 tons of rice at the start of the 1993/94 marketing year.

During the summer of 1993, northern Japan experienced extremely cool temperatures. Added to constant overcast days and inadequate sunshine, plus abnormally wet conditions (including six typhoons) throughout the rest of Japan, this reduced production prospects for the 1993 rice harvest. Japan's 1993 crop is currently forecast to be 7.5 million tons (milled basis), its smallest rice crop since World War II.

Japan's low stock level and meager 1993 harvest suggest the need to import about 1.6 million tons of rice by the end of 1994 in order to satisfy domestic consumption needs. But Japan's longstanding commitment to self-sufficiency in rice production has required a virtual ban on rice imports. Any significant rice imports by Japan would be perceived as a potential opening of Japan's domestic rice market. This could eventually weaken Japan's opposition to tariffication of barriers to free trade of rice in the Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT).

On October 5, Japan's Ministry of International Trade and Industry allocated import quotas for 200,000 tons of rice to meet immediate needs. According to the government, the imports are an emergency measure to meet strong seasonal demand for rice cakes and rice crackers.

These imports have been termed a "special exception" and "on an emergency basis," and Japanese officials have denied that they reflect any change in Japan's GATT position on rice trade. Further imports of over 1.4 million tons are projected by USDA for 1994.

### Japan Has Barred Imports & Supported Production

Nearly 9.5 million tons of rice are consumed in Japan each year. Japan insulates its domestic rice industry from international markets through a virtual ban on rice imports and high support prices (well above world trading prices).

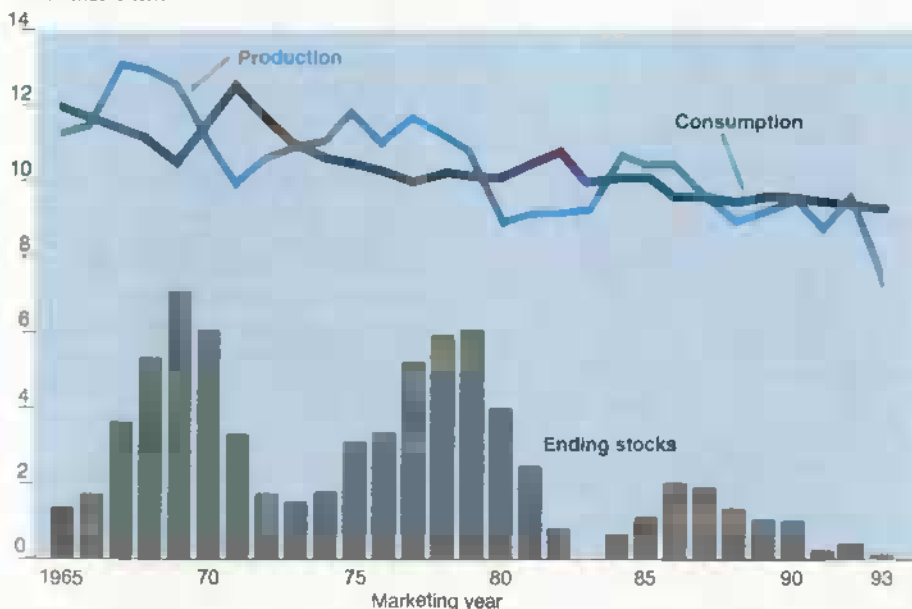
About 600,000 tons of rice are used in food processing for such products as rice cakes and noodles. Some substitution of rice types is possible for use in processed products, and as much as 400,000 tons of non-japonica rice could be imported from Asian countries to meet much of Japan's processed food needs.

Late last month, as *Agricultural Outlook* went to press, Japan made its first 1993 purchase of U.S. rice—15,000 metric tons from California.

## World Agriculture &amp; Trade

## Poor Harvest Shrinks Japan's Rice Stocks

Million metric tons



Milled basis. November-October marketing year.

Japan's glutinous rice needs, which account for a minor part of Japan's total domestic demand, are limited to use in desserts, ceremonial foods, and certain processed products. The remainder, and bulk, of Japan's rice consumption consists essentially of high-quality, round-shaped japonica "table rice."

In accordance with Japan's food policy, consumers bear most of the cost of self-sufficiency through high retail prices. This amounts to a substantial burden on consumers since Japan's producer and consumer prices are far in excess of world market prices. In the first 9 months of calendar 1993, the nongovernmental retail price for milled high-quality, nonglutinous rice in Tokyo averaged 501,319 yen per ton (\$4,530 using the 9-month average exchange rate of 110.48 yen per US\$1). The government-fixed purchase price for 1993 is 248,612 yen per ton (\$2,250) for lower quality rice.

These prices compare with the 9-month average f.o.b. Bangkok price of \$226 per ton for high-quality Thai 100-percent, grade B milled white rice, the price most often quoted as indicative of the export

price for rice in the world market. The Japanese government purchase price of rice is 10 times the world export price, while the nongovernment retail price for high-quality rice in Tokyo is 20 times the world export price of rice.

### Which Countries Will Sell to Japan?

The last time Japan reported major rice imports was in 1984, when it purchased 150,000 tons of high-quality japonica from a nontraditional rice exporter, South Korea. In the past, South Korea and Japan lent and borrowed rice from each other in order to avoid the "free trade" issue associated with their respective bans on rice imports. But with a short rice crop also expected in South Korea this year, japonica sales by South Korea to Japan are unlikely.

Most other japonica producers have limited ability to export. Taiwan limits its highly subsidized rice exports to about 200,000 tons destined for low-income countries, due principally to international pressure, particularly from the U.S. rice industry. China's demand for high-quality japonica rice for its large, rapidly

growing urban market already exceeds production capacity. And Japan's quality standards would likely rule out purchase of China's low-quality japonica.

Italy and Egypt are the principal Mediterranean producers of japonica rice; however, Egypt's exportable supplies average under 200,000 tons, generally destined for nearby markets. Italy primarily serves the European Community with highly subsidized japonica rice, and exports most of the remainder to neighboring Mediterranean countries.

Northern Brazil is a food deficit region, growing low-quality upland, medium grain rice that Japan would not likely accept. Only two potential sources of high-quality japonica rice remain: Australia and the U.S. Of the two, the U.S.—specifically California—has the greatest potential to supply Japan's needs.

Given the high retail prices paid by Japanese consumers and the country's relatively high income and financial resources, Japan's rice traders could conceivably enter the world market and purchase whatever type and quantity of rice they want. However, there are two principal limits to Japan's rice import potential: first, the availability of japonica supplies in Australia and the U.S.; and second, the export availability of existing supplies.

The rice industries in both California and Australia have made considerable effort to develop foreign and domestic markets for their rice. It is uncertain how quickly and to what extent they would be willing to give up certain stable, long-term markets for the high-priced, but temporary, Japanese market.

As of August 1, California had medium- and short grain whole-kernel stocks of 325,300 tons. California's 1993 rice crop is estimated to be 1.16 million tons (25 million cwt) of milled whole-kernel medium- and short grain, up 11 percent from 1992. After allowing for normal domestic use and stock levels, California's supply of exportable medium- and short grain head rice is expected to approach 500,000 tons.

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### Major Types of Rice

Indica and japonica are the two major types of rice grown worldwide. Indica accounts for nearly 80 percent of world production and world trade.

**Indica rice** is grown primarily in tropical regions and cooks dry and fluffy, with the grains remaining separate. China and India are the largest producers while Thailand, the U.S., and Vietnam are the largest exporters of indica rice. The EC, Latin America, and the Middle East are principal importers. Indica rice accounts for around 64 percent of table rice used in the U.S., where it is referred to as long grain rice. Indica rice is also used in flavored rice mixes, soups, frozen dinners, and other processed foods.

**Japonica rice** is a round-shaped grain that cooks moist and clingy. It accounts for almost 20 percent of world production and around 15 percent of trade. Japonica rice is grown in Japan, the Koreas, Taiwan, north central and northern China, Australia, northern Brazil, and in California where it is called short or medium grain rice. California, Australia, and Italy are the principal exporters of high-quality japonica rice. The traditional importers of japonica rice are the Mediterranean countries of Turkey, Israel, Jordan, Lebanon, and Syria. Additionally, the southern U.S. rice growing area produces medium grain rice that is not similar to the type of japonica used for table rice in Japan, Korea, and Taiwan.

Japonica rice from California accounts for around 21 percent of table rice consumption in the U.S., and medium grain from the Delta States accounts for almost 4 percent. Japonica and southern medium grain rices are also used in beer, cereal, rice cakes, baby food, and other processed foods.

**Aromatic (scented) varieties**—basmati rice from Pakistan and India and jasmine rice from Thailand—account for less than 1 percent of world rice production but make up 5-6 percent of trade. Basmati rice is distinguished by its popcorn-like aroma and elongation when cooked, and flavorful nutty taste. It is traded at 2-3 times the price of indica rice and is purchased mostly by Middle Eastern countries and the U.S. Thai jasmine rice is soft and clingy and is especially popular among some Asian-American groups.

**Glutinous (waxy) rice** accounts for less than 1 percent of total rice production and only a minute portion of trade. These varieties tend to lose their shape when cooked, and are sticky. Glutinous rice is used mostly in sweets, desserts, ceremonial dishes, and salad dressings in Asia, and is a staple in parts of Laos, Thailand, and China.

Since Australia lies in the Southern Hemisphere, its crop year runs opposite those of Japan and the U.S. Almost all of Australia's rice acreage is situated in New South Wales. Australia's rice farmers plant their crop in October and harvest March-May. The October planting date allows Australian farmers some flexibility in their planting decisions vis-a-vis the looming Japanese imports.

The principal constraints in Australia are the extent of irrigated area and the avail-

ability of water. Australia's rice area receives little or no rain during the summer months of December to March. The current situation in Australia limits area expansion and the resulting additional production to about 40,000 tons under the best of circumstances. Assuming average yields, this would produce a 1993/94 rice crop of 690,000 tons.

In addition, Australia's carry-in rice stocks are estimated at 262,000 tons.

Allowing for normal domestic use and minimum stock needs, Australia's supply of exportable rice is expected to be about 670,000 tons. However, about 300,000 tons of this is destined for traditional export markets, and some of this supply consists of long grain and broken rice.

In short, the maximum potential available export supply of japonica rice from Australia and the U.S. appears to be well under 1 million tons, while Japan's import needs, particularly for high-quality japonica rice for general consumption, are in the neighborhood of 1.2 million tons (not including an estimated 400,000 tons of imported rice for industrial use).

The impact on world prices could be substantial, triggering a significant price spillover effect in the long grain and lower quality japonica rice markets. In addition, the large volume of Japan's rice import needs is magnified by the psychological impact of Japan's breaking its long-held taboo on rice imports. Such a move may be viewed as having important implications for the current Uruguay Round of GATT negotiations, where Japan has been a fierce defender of its virtual ban on rice imports.

U.S. prices are expected to move higher than world prices due to an already strong domestic market and a tightening internal supply situation due to Japan's need for imports. It is likely that much of the rice exported under the Export Enhancement Program, along with some domestic uses, will shift from California to the Delta States.

Delta medium grain, however, has different cooking characteristics from those associated with California rice. Domestic long grain rice is expected to compete for some of the export business other than japonica sales, which Japan will be forced to make, pushing long grain prices higher.

The situation is still evolving as the final size of Japan's rice crop remains uncertain. With consumption already estimated at historic low levels, any further decline in Japan's rice crop would generate further need for imports.

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## Rural Development



### Counties with High Percent Of Ag Jobs Decline

**F**rom a decline in the number of tractor dealers, fertilizer manufacturers, and frozen broccoli plant workers to a decrease in the ranks of farmers, farm-related jobs continue to slide. And in many regions of the U.S., the number of counties depending on agricultural jobs has receded. Employment trends indicate that areas where farming and farm-related industries account for a high proportion of local jobs will have difficulty sustaining or expanding economic growth unless these communities can diversify their industrial base.

Farming and farm-related industries directly linked to agriculture—agricultural services, agricultural inputs, and the processing and marketing of agricultural products—lost 1.4 million jobs in the U.S. between 1975 and 1990. While jobs in farming and farm-related industries still remain a major part of the economic base in some areas of the U.S., the number of counties that depend heavily on agricultural employment has declined.

### Farming Declines but Is Largest Ag Industry

According to USDA's Economic Research Service, in 1975 over 47 percent of U.S. counties were high agriculture-employment counties, defined as having at least 25 percent of their total employment in farming and its closely related industries. By 1990, only 27 percent of U.S. counties met this definition.

Fewer counties now depend on agriculture because of an increase in the number of nonagricultural jobs as well as the decline in agricultural jobs. The high ag-employment counties remaining in 1990 had far less success in attracting new jobs between 1975 and 1990 than other counties in the U.S. Average growth in total employment was only 17.4 percent in high ag-employment counties, compared with the U.S. average of 46.4 percent.

Most of the decline in agricultural employment in the former high ag-employ-

ment counties was in farm production, where labor-saving technology continues to erode jobs. In addition, former high ag-employment counties have attracted nonagricultural employment, also diminishing agriculture's share of total county employment.

More than half of the country's remaining high ag-employment counties are concentrated in the Northern and Southern Plains and the Corn Belt. The Southeast and Appalachia had 92 and 138 counties, about 11 and 16 percent of the country's total high ag-employment counties. The Delta, Lake States, Mountain, and Pacific regions each had between 2 and 8 percent of the total, while the Northeast had only one high ag-employment county.

In the high ag-employment counties, farm production still accounted for the biggest share of farm-related employment in most regions of the U.S. in 1990, even as it continues to decline. Farming accounts for between 68 and 72 percent of total agricultural employment in the

### Agriculture's Closely Linked Industries

Four groups make up the industries that, including farming, are most closely linked to agriculture. These farm and farm-related industries are farm production, agricultural services, agricultural inputs, and processing and marketing. Two other farm-related industries—wholesale and retail trade of agricultural goods and indirect agribusiness (such as manufacturers of food products machinery)—are only peripherally related to agriculture and are not included in this study.

**Farm production** workers include farm proprietors and farm wage and salary workers.

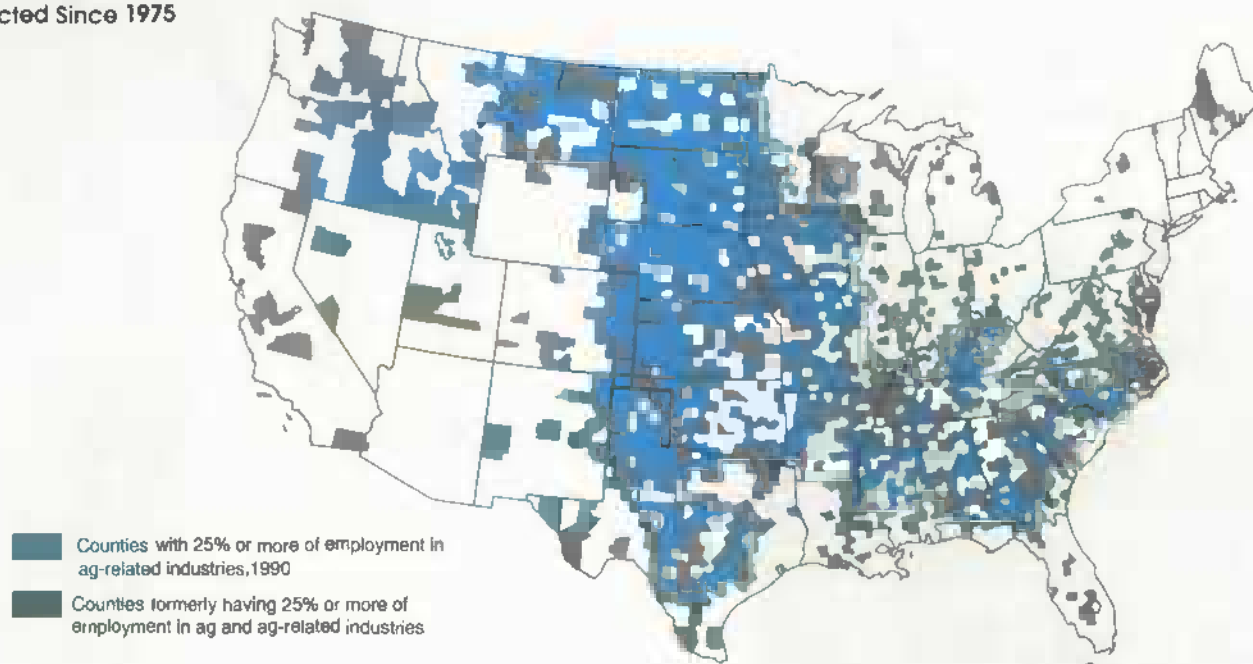
**Agricultural service** industries include firms that provide soil preparation, veterinary care, and farm management. The category also includes forestry and fishing.

**Agricultural input** industries have the most direct linkage to farming among the related industries. Most of the agricultural input jobs are in the manufacture of farm machinery and equipment and in wholesale trade of farm machinery, equipment, and supplies. Other input industries are agricultural chemical manufacturing, and chemical and fertilizer mining.

**Processing and marketing** industries prepare agricultural goods for sale after the products leave the farm. Apparel and textile manufacturing provide most of the processing and marketing jobs. Manufacturers of meat, dairy, and other food products are also included in this industry group.

## Rural Development

### The Number of High Ag-Employment Counties Has Contracted Since 1975



Northern and Southern Plains, Corn Belt, Mountain, Lake States, and Northeast counties. High ag-employment counties in the Northwest, Appalachian, Delta States, and Southeast regions have more jobs in agricultural processing and marketing than in farm production, with apparel and textile manufacturing accounting for most of this employment.

The greatest number of jobs in agricultural input industries in 1990—especially in manufacturing and wholesale trade of farm machinery, equipment, and supplies—could be found in high ag-employment counties of the Northern Plains and the Corn Belt. Agricultural input employment accounted for about 7 percent of total agricultural jobs in the high ag-employment counties in these regions.

High ag-employment counties in the Pacific and Corn Belt regions had the greatest number of jobs in agricultural services (which includes forestry and fishing), but these jobs amounted to only 2.7 and 1.9 percent of agricultural employment in 1990.

### Farming & Input Industries Lost Jobs . . .

In the 855 high ag-employment counties that remained in 1990, agricultural job numbers shrank from 1.5 million jobs in 1975 to 1.3 million in 1990, with farm production and agricultural input industries accounting for most of the decline. Farm production still held the largest share of total agricultural employment in these counties in 1990—55 percent—but this was down from 65 percent in 1975. Agricultural input industries accounted for about 4.9 percent of total agricultural employment in 1990, down from 5.3 percent in 1975.

Farm production lost over 245,000 jobs in high ag-employment counties between 1975 and 1990, accounting for most of the total decline in agricultural employment in these counties. Employment in farm production declined for high ag-employment counties in all 10 farm production regions from 1975 to 1990. Job losses in farm production ranged from a 6-percent decline in the Pacific region to

a 36-percent decline in the Delta, with most regions experiencing about a 25-percent decline. Over half of the farm production jobs lost were in the Appalachian, Northern Plains, and Corn Belt regions.

Agricultural input industries lost 14,000 jobs in high ag-employment counties between 1975 and 1990. Agricultural input industry employment fell in most regions, declining 18 percent on average. The job loss was greatest in the Corn Belt, where input jobs declined by nearly 25 percent. Farm financial stress in the early 1980's contributed to weakness in farm machinery and equipment manufacturing, and in wholesale trade of farm machinery, equipment, and supplies. Employment began to increase later in the decade as farm income rose and capital expenditures increased, but not enough to offset earlier job losses.

## In High Ag-Employment Counties...

## Nonagricultural Industries and Services Account for Most Employment...

Region	High ag-employment counties #	Total employment	Ag employment				Total	Nonag employment
			Farm production	Services <sup>1</sup>	Inputs	Processing & marketing		
					1,000			
Appalachia	138	1,071.7	144.2	3.1	6.9	192.7	346.9	724.8
Corn Belt	122	872.6	143.7	4.1	15.9	49.8	213.5	459.1
Delta States	61	320.7	46.8	3.0	4.7	50.7	105.1	215.5
Lake States	37	251.0	56.5	1.4	6.4	13.6	77.9	173.1
Mountain	71	179.2	44.0	1.1	3.8	12.3	61.2	118.0
Northeast	1	8.4	.8	.0	.2	1.5	2.5	5.8
Northern Plains	203	538.3	136.7	3.2	13.1	31.8	184.8	353.6
Pacific	17	138.4	33.0	1.2	2.8	9.7	46.7	91.7
Southeast	92	559.3	57.0	5.6	6.8	122.3	191.8	367.5
Southern Plains	113	371.3	85.9	2.0	5.7	25.4	118.9	252.4
U.S. total <sup>2</sup>	855	4,110.7	748.4	24.7	66.2	509.9	1,349.3	2,761.5

1990 data. U.S. counties with 25 percent or more of their employment in ag and ag-related industries in 1990.

<sup>1</sup> Includes forestry and fishing. <sup>2</sup> Does not include Alaska and Hawaii.

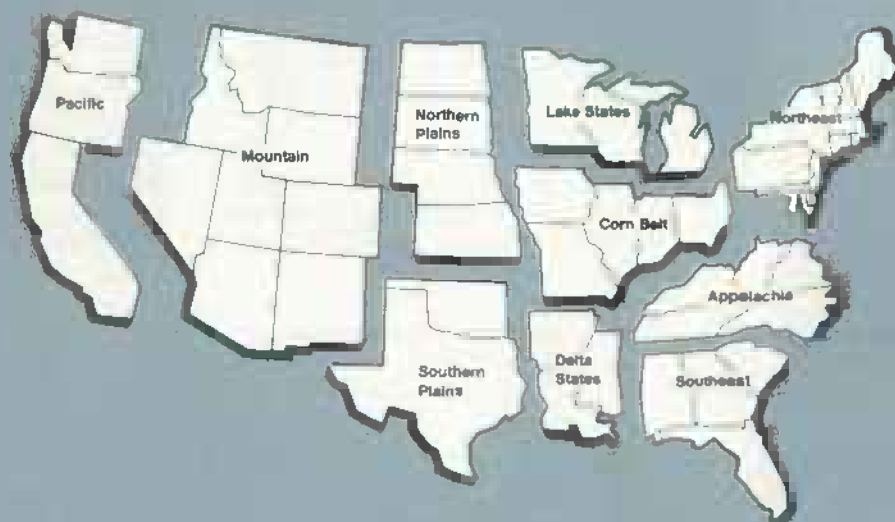
...and Their Job Growth Has Been Greatest <sup>1</sup>

Region	Total employment	Ag employment				Total	Nonag employment
		Farm production	Services <sup>2</sup>	Inputs	Processing & marketing		
Appalachia	30.6	-23.7	51.5	-23.0	11.0	-7.2	62.2
Corn Belt	12.7	-22.9	57.7	-24.9	27.1	-14.4	32.1
Delta States	18.1	-35.7	147.1	-13.7	44.0	-8.3	37.4
Lake States	13.4	-24.4	114.8	4.6	30.6	-15.3	33.8
Mountain	6.5	-18.7	3.0	-20.2	9.3	-14.1	21.6
Northeast	42.0	-19.2	-27.7	149.3	-3.3	-5.2	81.6
Northern Plains	7.0	-22.8	40.1	-15.7	29.5	-15.8	24.5
Pacific	24.5	-6.3	115.8	-8.2	42.8	2.5	39.9
Southeast	26.3	-31.2	119.2	-22.5	13.9	-4.9	52.3
Southern Plains	3.3	-28.7	-2.4	-14.9	31.8	-19.9	19.7
U.S. total <sup>3</sup>	17.4	-24.7	64.2	-17.7	18.6	-11.1	39.3

U.S. counties with 25 percent or more of their employment in ag and ag-related industries in 1990.

<sup>1</sup> Change in jobs between 1975 and 1990. <sup>2</sup> Includes forestry and fishing. <sup>3</sup> Does not include Alaska and Hawaii.

U.S. Farm Production Regions



## Rural Development

### ...While Processing & Marketing Gained

Agricultural processing and marketing industries, with the second-largest share of farm-related employment in high ag-employment counties, increased that share from 28 percent in 1975 to 38 percent in 1990. With a gain of nearly 81,000 jobs during this period, the processing and marketing industries comprised the fastest growing agricultural industry group in high ag-employment counties. Despite these gains in high ag-employment counties, over 608,000 processing and marketing jobs were lost nationally during this period.

Processing and marketing jobs increased in high ag-employment counties in all regions except the Northeast, but the gains in Appalachia, the Delta States, and the Southeast were largest, collectively accounting for 40 percent of the employment increase. Meat products processing, particularly poultry, as well as apparel and textile manufacturing, were among the expanding agricultural processing and marketing industries in high ag-employment counties.

Increased consumer demand for some agricultural products, which led to job creation in the processing industry, accounted for part of the expanded employment in processing enterprises in high ag-employment counties. Relocation of processing plants to be closer to farms was also a factor in this industry's increased employment in high ag-employment counties.

These counties also gained almost 10,000 jobs in agricultural services, forestry, and fishing industries between 1975 and 1990. The Delta, Lake States, Pacific, and Southeast regions more than doubled the number of these agricultural service jobs in their high ag-employment counties.

The largest employment growth in high ag-employment counties between 1975 and 1990 was in nonagricultural industries, which gained nearly 779,000 jobs in these counties and increased their share of employment from 57 to 67 percent overall. Although 653 high ag-employment counties lost agricultural jobs between 1975 and 1990, nonagricultural employment replaced the jobs that were lost and created additional employment in 576 of these counties. High ag-employment counties in Appalachia gained the most nonagricultural jobs—over 278,000.

### Strategies for Employment Growth

Based on trends from 1975 to 1990, agricultural industries offer limited potential job growth. Even in high ag-employment counties, farm production jobs have declined over time, and offer the least promise for employment expansion. Input industries, with strong upstream linkages to farming, are affected in turn by declining demand for inputs from the farm production sector.

Within the overall agricultural sector, job gains are more likely to occur in agricultural services, where demand for on-farm services such as farm labor contractors is rising. Relocation of processing plants closer to farms has helped increase the number of processing jobs in high ag-employment counties, but advances in automation may impede further employment growth in processing industries.

Developing new industrial uses for traditional farm commodities, or for new non-traditional crops, may help sustain jobs in the farm sector. Government environmental regulations and growing consumer preference for "green" products are expanding industrial demand for agricultural materials. Ethanol, soy-oil inks, and biodiesel fuels are among the new ag-based products showing promise of success.

But a critical strategy for increasing jobs in high ag-employment counties is the encouragement of nonagricultural businesses. Rural enterprise zones, rural incubators, and investment in technology to overcome remoteness of location are among the opportunities for expanding nonagricultural jobs.

[Jackie Salsgiver (202) 219-0525] AO

### November Releases from USDA's Agricultural Statistics Board

The following reports are issued at 3 p.m. Eastern time on the dates shown.

#### November

- 1 Crop Progress (after 4 p.m.)
- 3 Broiler Hatchery  
Egg Products  
Poultry Slaughter
- 5 Dairy Products
- 8 Crop Progress (after 4 p.m.)
- 9 Cotton Ginnings  
Crop Production
- 10 Broiler Hatchery
- 15 Crop Progress (after 4 p.m.)  
Turkey Hatchery
- 16 Farm Labor  
Milk Production
- 17 Broiler Hatchery
- 19 Cattle on Feed  
Livestock Slaughter
- 22 Catfish Processing  
Cold Storage  
Crop Progress (after 4 p.m.)
- 23 Eggs, Chickens, & Turkeys  
Sheep & Lambs on Feed
- 24 Broiler Hatchery  
Cotton Ginnings
- 29 Crop Progress (after 4 p.m.)  
Peanut Stocks & Processing  
Agricultural Prices



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## Special Article



USDA Soil Conservation Service photo by Tim McCabe

## U.S. Conservation Policy— What's Ahead?

**A**griculture is coming under more vigorous environmental scrutiny, and U.S. conservation policy is moving to promote greater stewardship on the farm. Public concerns over adverse environmental effects of agriculture have already begun to wield influence on public policy. Federal wetlands policy, the debate over grazing fees on federally owned lands, and the provisions of Clean Water Act are some prominent examples.

Agricultural nonpoint-source pollution—soil erosion and runoff of chemicals and sediment from cropland—is a major source of water pollution. Sixty percent of the nation's environmentally impaired river miles are affected by agricultural runoff, according to a 1990 Environmental Protection Agency report to Congress. More recent assessment suggests that nonpoint-source pollution may prevent the U.S. from achieving its water quality goals even after planned point-source controls are completed. Suspended sediment and nutrients generated from farming are cited as the most prevalent nonpoint sources of pollution.

Degradation of surface water also has been attributed partly to chemical loadings in groundwater that discharge into bays, lakes, and streams. A national well-water survey conducted by

EPA in 1988-90 detected nitrates in the majority of sampled rural drinking water wells. About 10 percent of the nation's community water system wells and 4 percent of rural domestic wells were estimated to contain at least one pesticide. The chemicals were often found in trace amounts, and the dangers posed to human health and the environment are uncertain.

Loss of the nation's wetlands—which provide natural flood control, recharge groundwater, support biotic diversity, and improve water quality—has been largely attributable to agriculture. Between the mid-1950's and mid-1970's, about 87 percent of the 13.8 million acres of wetland conversions were to agricultural uses, according to the U.S. Fish and Wildlife Service. Agricultural conversion of wetland has declined in recent years because of the Swampbuster provision of the 1985 Farm Act as well as lower profitability, but remains an area of environmental concern.

### *Current Policy Course Sets the Stage . . .*

These concerns are not only influencing agricultural policy, as evidenced by the 1985 and 1990 Farm Act conservation provision, but increasingly are shaping environmental policy outside the domain of USDA. Environmental concerns are likely to play an even larger role in future policy decisions directly and indirectly affecting agriculture.

**Clean Water Act.** With reauthorization of the Clean Water Act impending, support is growing for increased controls on agricultural sources of pollution. Nonpoint-source pollution management efforts initiated in the 1987 Water Quality Act relied largely on voluntary approaches and have been viewed as unsuccessful. New approaches are under consideration.

The Senate bill reauthorizing the Clean Water Act (S.114) requires states to adopt the management measures approach outlined in the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA)—the first Federal program to require specific measures to address agricultural nonpoint-source pollution. In addition to requiring farmers to adopt specific measures, states would have to ensure implementation. Policies and mechanisms of enforcement range from traditional regulatory activities to innovative incentive programs.

**Wetlands Policy.** In August 1993, the Clinton Administration released a plan it characterized as "a fair, flexible, and effective approach" to protecting wetlands. The latest in a series of administrative and legislative proposals to reform how the Federal government regulates wetlands, the Clinton Interagency Working Group on wetland policy moved more quickly than its predecessors (see September 1993 AO). A plan introduced by former President Bush in August 1991 was never implemented, because of disagreements among agencies and the Domestic Policy Council, while in the 102nd Congress, legislative proposals were controversial enough to sidetrack Clean Water Act reauthorization.

The Clinton Administration plan would streamline processing of dredge and fill permits that regulate wetlands under Section 404. The new provisions would include a 90-day processing deadline for most routine permits, less vigorous permit review for small projects with limited impacts, and an administrative appeals process when a permit is denied. The plan would give USDA responsibility for all delineation of wetlands on agricultural lands, and would exempt from Section 404 jurisdiction the 53 million acres of wetlands converted to cropland prior to 1985.

Certain manmade wetlands, such as upland drainage and irrigation ditches, would also be exempted from Section 404 jurisdiction under the Administration plan. A nationwide general permit would also be issued exempting farmers' operations that have minimal effect on wetlands or that are mitigated by restoration elsewhere on the farms. USDA's Soil Conservation Service would make the determination, and this provision is intended to ensure consistency between Section 404 and the 1985 Food Security Act's Swampbuster provision.

The Administration plan supports wetland restoration efforts, including USDA's Wetland Reserve Program, and advances wetland banking to mitigate wetland loss under Section 404 permits, and other voluntary, cooperative programs. These include the U.S. Fish and Wildlife Service North American Waterfowl plan joint ventures, Partners for Wildlife, and Bay and Estuary programs, and the Forest Service Forestry Incentives and Stewardship Incentives programs.

The Administration proposal is a movement toward more consistent treatment of wetlands in both the Swampbuster provision and Section 404 permit decisions. Greater wetland restoration will benefit farmers, who own much of the current and former wetlands that could be restored in these programs.

**Grazing policy.** The Clinton Administration's grazing policy seeks to increase grazing fees and impose new environmental regulations on ranchers and herders who graze livestock on Federal lands. The plan originally called for doubling grazing fees over a 3-year period, and after a recent compromise with Congress, calls for raising fees by 85 percent over that period. Holders of Federal grazing permits would face new standards designed to protect the environmental health of Federal rangeland. Although the plan has met with resistance from western constituents, it has drawn considerable support from environmentalists.

### **... While Future Policy Faces New Constraints**

Policies affecting agriculture will likely be met with increased public demand for environmental accountability in the agricultural sector, and pressure for a continued downward trend in the level of agricultural price and income supports. These issues will converge in the next farm bill, expected in 1995. Although

it is too early to predict the contents of the next farm bill, legislators will deliberate within a policymaking environment influenced by the following elements:

- *The agricultural conservation agenda has broadened.* Although conservation and environmental provisions were strengthened in the 1985 and 1990 Farm Act conservation titles, future legislation will likely require additional emphasis on water quality, sustainability, wildlife habitat and biodiversity, and farmworker and food safety issues.
- *The trend toward greater market orientation in agriculture will continue, as the need to reduce agricultural budgetary outlays increases.* Greater market orientation implies decreasing subsidization of the sector and consequently diminished leverage for the compliance approach to conservation. Continued reductions in commodity program benefits likely will be necessary; increasing normal flex acres above 15 percent is one possible approach, and further reducing 0185-92 and 50/85-92 program payments is another.
- *Some question the effectiveness of traditional voluntary policy instruments in achieving further conservation and environmental goals.* The record of the first 50 years of conservation programs suggests that purely voluntary assistance programs—education, technical assistance, and cost sharing—may not be enough to deal adequately with agriculture's environmental effects. Medium-term voluntary land retirement (Conservation Reserve Program) and permanent easements (Wetlands Reserve Program) can be effective but expensive, limiting their use as budgets shrink. Compliance mechanisms can be effective if sufficient leverage exists, but leverage in the form of commodity program payments is eroding.
- *What, if anything, will succeed CRP after the present contracts expire beginning in late 1995?* This concern exists among both farmers and the conservation coalition. Because of the potential production increase from CRP land reverting to farm use, supply control objectives will once again become more explicit.
- *Some are dissatisfied with USDA efforts in enforcing the compliance provisions established by the 1985 Farm Act.* Environmental groups assert that USDA has been lax in enforcing conservation compliance, Sodbuster, and Swampbuster, thus reducing the effectiveness of these programs. As the deadline for full implementation of conservation compliance approaches, it will become apparent whether farmers are following through with their conservation plans.
- *Existing compliance approaches sometimes fail to address environmental problems associated with nonprogram crops.* The compliance provisions of the 1985 Farm Act apply mainly to producers growing program crops. Two-thirds of U.S. producers do not receive farm program

## Special Article

## Glossary of Conservation Programs

***Provisions of the 1985 & 1990 Farm Acts***

**Conservation Reserve Program (CRP)** allows farmers to voluntarily retire from crop production highly erodible or environmentally sensitive cropland for a 10- to 15-year period. In exchange, participants receive annual rental payments up to \$50,000, and 50 percent cost-share assistance for establishing vegetative cover on the land.

**Conservation compliance provision** requires farmers with highly erodible cropland to have an approved conservation plan on that land and to fully implement the plan by January 1, 1995, to maintain eligibility for farm program benefits.

**Sodbuster provision** requires that, in order to be eligible for Agricultural program benefits, farmers who convert highly erodible land to commodity production must have an approved conservation system on that land.

**Swampbuster provision** states that farmers who convert wetlands for the production of an agricultural commodity are ineligible for farm program benefits, unless it is determined that conversion would have only a minimal effect on wetland hydrology and biology.

**Wetlands Reserve Program (WRP)** provides easement payments and cost sharing to farmers who return farmed or converted wetland back into a wetland environment on a permanent or long-term basis. Payments cannot exceed the fair market value of the land less the value of permitted uses, such as hunting, fishing, managed timber harvest, or periodic haying and grazing. Up to 1 million acres may be enrolled in the program by 1995.

**Water Quality Incentives Projects (WQIPs)** provide annual incentive payments up to \$3,500 per year for 3-5 years to farmers who implement a USDA-approved water quality resource management plan.

**Environmental Easement Program**, when funds are appropriated for its implementation, will provide annual payments

for up to 10 years and up to 100 percent cost sharing to farmers who agree to deed restrictions that provide long-term protection to environmentally sensitive land. Payments cannot exceed \$50,000 annually and can total no more than \$250,000 per farm.

**Integrated Farm Management Program** assists producers in adopting farm resource management plans to conserve resources and comply with environmental requirements. Participants devote at least 20 percent of their enrolled cropland to resource conserving crops such as legumes or legume-grass-small-grain mixtures, without losing cropland acreage bases and reducing farm program yields. Unlimited haying or grazing may occur on up to 50 percent of the resource conserving crops on Acreage Conservation Reserve lands. Other haying and grazing provisions further increase producers' options. The program's goal is to enroll 3-5 million acres per year through 1995.

**Farmland Protection provision** stipulates that the Farmers Home Administration (FmHA) provide guarantees and interest rate subsidies for institutional loans to states for purposes of protecting and preserving farmland for agricultural use. No implementation has occurred to date.

**Pesticide Recordkeeping provision** requires private applicators of restricted-use pesticides to maintain records accessible to state and Federal agencies regarding products applied, amount, and date and location of application. The requirement became effective May 10, 1993.

**Forest Stewardship Program** provides grants to state forestry agencies for expanding tree planting and improvement and for providing technical assistance to owners of nonindustrial private forest lands in developing and implementing forest stewardship plans to enhance multi-resource use.

**Stewardship Incentive Program (SIP)** provides cost-sharing up to 75 percent for practices in approved forest stewardship plans for enhancing multiple uses of nonindustrial private forest lands. Payments may not exceed \$10,000 annually per landowner and practices must be maintained for at least 10 years.

payments, and are not required to meet conservation and environmental goals of compliance provisions. Conservation and environmental policies are needed to address negative environmental effects from specialty crops, livestock, and other nonprogram commodities.

- **Other Federal and state agencies also pursue strategies to reduce agriculture's contribution to environmental degradation.** USDA's responsibility for designing and imple-

menting conservation and environmental policy is shared with other government entities. For example, EPA already administers the Clean Water Act, Coastal Zone Management Act, Endangered Species Act, Safe Drinking Water Act, and FIFRA—all of which significantly affect agricultural practices. States routinely implement regulations on land use and agricultural practices. Coordinating policies and instruments of implementation across agencies will be critical.

## Longstanding USDA Programs

**Agricultural Conservation Program (ACP)**, initiated in 1936, provides financial assistance (up to \$3,500 annually or \$35,000 under long-term 10-year agreements) to farmers who carry out approved conservation and environmental protection practices on agricultural land and farmsteads. Administered by the Agricultural Stabilization and Conservation Service (ASCS).

**Conservation Technical Assistance (CTA)**, initiated in 1936, provides technical assistance to farmers for planning and implementing soil and water conservation and water quality practices. Administered by the Soil Conservation Service (SCS) and local Conservation Districts.

**Extension Service (ES)** information and recommendations are provided on soil conservation and water quality practices to landowners and farm operators in cooperation with the State Extension Services and state and local offices of USDA agencies and Conservation Districts.

**Small Watershed Program**, initiated in 1954, assists local organizations in flood prevention, watershed protection, and water management. Part of the effort involves establishing measures to reduce erosion, sedimentation, and runoff.

**Great Plains Conservation Program (GPCP)**, initiated in 1957, provides technical and financial assistance in 10 Great Plains states for conservation treatment on entire operating units. Financial cost-share assistance is limited to \$35,000 per farmer contract. GPCP is now funding a water quality special project in each of the 10 states.

**Resource Conservation and Development Program (RC&D)**, initiated in 1962, assists multicounty areas in enhancing conservation, water quality, wildlife habitat, recreation, and rural development.

**Water Bank Program**, initiated in 1970, provides annual rental payments to farmers for preserving wetlands in important migratory waterfowl nesting, breeding, or feeding areas.

**Colorado River Salinity Control Program**, initiated in 1974 and amended in 1984, established a voluntary on-farm cooperative salinity control program within the USDA, and provides cost-sharing and technical assistance to farmers to improve the management of irrigated lands to reduce the amount of salt entering the Colorado River.

**Forestry Incentives Program**, initiated in 1978, provides cost sharing up to 65 percent for tree planting and timber stand improvement for private forest lands of no more than 1,000 acres. Maximum payment per owner is \$10,000 annually.

**Emergency Conservation Program**, initiated in 1978, provides financial assistance to farmers in rehabilitating cropland damaged by natural disasters.

**Rural Clean Water Program (RCWP)**, initiated in 1980 and scheduled to end in 1995, is an experimental program that has been implemented in 21 selected areas. It provides cost-sharing and technical assistance to farmers who voluntarily implement approved best management practices to improve water quality. Cost-share payments are limited to \$50,000 per farm.

**Farmers Home Administration (FmHA) loans** are made to farmers for soil and water conservation, pollution abatement, and building or improving water systems. May acquire 50-year conservation easements as a means of helping farmers reduce outstanding loan amounts. Also places conservation easements on foreclosed land being sold, or transfers such lands to government agencies for conservation purposes.

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- *Trade agreements can limit domestic agricultural policy choices: environmental policies can affect trade.* Efforts to reduce trade barriers in agriculture invariably affect domestic agricultural policies because domestic and trade policies interact. Freer trade could require reform of many existing farm programs along with their environmental compliance provisions. Trade reform could also affect environmental quality as input use and output mix adjust to

new price levels. Additionally, environmental policies may affect competitive advantage. In meeting environmental goals, trade-distorting policies will have to be avoided. For example, "environmental incentive" or "green" payments for environmental performance may be among the few forms of support allowable as agricultural income support is further decoupled from current production under free trade.

## Special Article

## Two Approaches To Promote Stewardship

These new environmental and budgetary constraints bring agricultural policy to a crossroads. Maintaining current levels of current conservation programs in the next farm bill will be difficult—the CRP, for example, is costing \$2 billion per year. Reductions in Federal income support (resulting mainly from Federal budget deficit pressure) are reducing the leverage of environmental compliance linked to farm programs. Reverting solely to the pre-1985 education, technical assistance, and cost-sharing programs also seems unlikely since they are perceived by many in the environmental community as incapable of delivering the environmental results now demanded from agriculture.

As a result, two approaches to agricultural conservation and environmental policy will likely receive greater consideration. The first would involve greater reliance on command-and-control measures (regulation) to force producers to address the environmental consequences of farm production activities. The second would redirect some or all of the payments under the commodity programs to environmental performance—environmental stewardship payments. While greater regulation would constitute a radical departure from the voluntary tradition of past agricultural policy, stewardship payments would be an evolutionary extension of trends in agricultural policy since the early 1980's.

**The regulatory approach.** Conventional command-and-control regulations, such as chemical or cultural practice bans, restrictions on chemical use rates or on timing of applications, and land-use restrictions might be imposed on agriculture. Command-and-control instruments could also be implemented as negative incentive schemes such as taxes, fines, and penalties to induce environmental compliance. An example would be taxing fertilizers or pesticides. Revenues generated by such taxes could be used to finance cost-sharing or stewardship payments. Research and development into alternative production practices could also be partially funded by tax revenues.

Command-and-control policies have been employed in other industries with varying degrees of success. One lesson from these experiences is that industries can survive under environmental regulation, although the process of adjustment is not always easy or without cost.

**Environmental stewardship payments.** Stewardship payments could be made through an expansion of existing programs such as the Agricultural Conservation Program (ACP) or the Water Quality Incentive Program (WQIP), and would be used to encourage the use of environmentally friendly agricultural technologies. These could be investments in practices such as filter strips, or information technologies such as soil nitrogen testing. Other stewardship instruments could include incentive payments for environmental performance and tax credits for investments.

Longer term land retirement programs like the CRP or WRP could also operate under an environmental stewardship program. In any case, land would be eligible and targeted according to its environmental vulnerability based on erodibility, leachability, or qualification for biological protection, such as wetlands or the presence of endangered species.

Stewardship payments could be designed to cover some portion of actual implementation costs, plus an incentive payment to induce a change in behavior. They would not be designed to support income per se, but would be made in exchange for environmental services by the producer. And unlike the current commodity programs, stewardship payments would not be tied to a single group of crops, but would instead focus on production practices. Incentives could be made available to a wider group of producers, including specialty crop and livestock producers and others excluded from traditional commodity programs.

### Read More About It

Additional information on agricultural impacts on the environment, and the direction of U.S. conservation planning and policy are discussed in detail in the following reports by USDA's Economic Research Service.

- *Agricultural and Water-Quality Conflicts: Economic Dimensions of the Problem*, ERS Report No. AIB-676, July 1993 (\$9 per copy).
- *Point-Nonpoint Source Trading for Managing Agricultural Pollutant Loadings: Prospects for Coastal Watersheds*, ERS Report No. AER-674, September 1993 (\$9 per copy).
- *Equilibrium Effects of Agricultural Technology Adoption: The Case of Induced Output Price Changes*, ERS Report No. TB-1823, September 1993 (\$9 per copy).

To order the above reports, call 1-800-999-6779.

- *Agricultural Nonpoint Source Pollution and Economic Incentive Policies: Issues in the Reauthorization of the Clean Water Act*, ERS Report No. AGES-9229, November 1992. (Contact Marc Ribaud (202) 219-0444)
- *Agricultural Chemical Use and the Potential for Ground Water Quality: Where Are the Potential Problem Areas?* ERS, Soil Conservation Service, Cooperative Research Service, and National Center for Resource Innovations, 1993 (Contact Margaret Maizel (NGRI) at 703-524-4554 for information).

At a recent national conference on agricultural conservation policy, the environmental stewardship payment approach was endorsed by more speakers than any other approach as an option for the future. However, many also stated that more regulations are likely since they are viewed as less costly to the government than financial incentives. Most regulations will probably be enacted at the state and local level, but only after significant environmental problems have been identified.

### ***Future Policy Design Based on Ecosystems***

Regardless of the policy approach, future agricultural and environmental policy likely will be implemented on a whole-farm resource management basis or a watershed-wide basis. These ecosystem management designs coordinate system-wide conservation planning for dealing with water, air, plants and animals, and their interactions. The former would require significant monitoring and planning well beyond current conservation plan requirements; the latter might require sharing conservation planning and monitoring authority with other agencies.

The whole-farm planning approach, while certainly not new, is finding renewed support. For example, proposed congressional legislation (H.R. 1440) calls for "comprehensive site-specific resource management plans on land used for the production of agricultural commodities." Because the negative environmental impacts of most agricultural and industrial practices are confined to the associated watershed, the concept of managing resources with the watershed as the jurisdictional authority is becoming widely accepted. However, watershed management will still have to overcome the problem of jurisdictional boundaries that do not conform to watershed boundaries.

Improving agriculture's environmental performance will require significant coordination across Federal agencies and state and regional authorities. USDA-related legislation such as the 1995 farm bill will be only one part of an overall attempt to control the impact of agriculture on the environment.

Few new options are currently being proposed for the upcoming farm bill. Among the measures being considered are increased environmental regulation, and an increase in incentive payments to producers for adopting environmentally friendly practices, possibly funded by transferring funds from commodity programs. Because the design and implementation of ag-related policies occur chiefly in the political arena, retooled policies must ultimately meet political as well as environmental goals.

*[Tim Osborn, Margot Anderson, Ralph Heimlich, and Marc Ribaud (202) 219-0403. Parts of this article were based on sections of an ERS discussion paper by Pat Canning, Margriet Caswell, and Robbin Shoemaker.] AO*

### **Upcoming Reports from USDA's Economic Research Service**

The following are November release dates for ERS update reports (specified) and for summaries of situation and outlook reports. Summaries are issued at 3 p.m. Eastern time.

#### **November**

- 3 Food Needs Assessment
- 10 Vegetables & Specialties  
Cotton & Wool Update
- 15 Livestock & Poultry
- 17 Fruit & Tree Nuts
- 18 Agricultural Outlook
- 19 Wheat
- 22 U.S. Agricultural Trade Update  
Cotton & Wool  
Livestock & Poultry Update
- 23 Feed
- 30 Agricultural Exports
- OUTLOOK CONFERENCE**

# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1992		1993						1994	
	IV	Annual	I	II	III	IV-F	Annual F	I F	Annual F	
Prices received by farmers (1977=100)	137	140	140	143	141	—	—	—	—	
Livestock & products	157	157	162	167	162	—	—	—	—	
Crops	117	121	117	119	120	—	—	—	—	
Prices paid by farmers, (1977=100)										
Production items	176	174	176	178	—	—	—	—	—	
Commodities & services, interest, taxes, & wages	192	191	194	197	—	—	—	—	—	
Cash receipts (\$ bil.) 1/	163	189	164	—	—	—	—	—	—	
Livestock (\$ bil.)	89	86	88	—	—	—	—	—	—	
Crops (\$ bil.)	73	83	78	—	—	—	—	—	—	
Market basket (1982-84=100)										
Retail cost	139	138	141	142	—	—	—	—	—	
Farm value	104	103	105	107	—	—	—	—	—	
Spread	158	157	160	160	—	—	—	—	—	
Farm value/retail cost (%)	26	26	26	27	—	—	—	—	—	
Retail prices (1982-84=100)										
Food	139	138	140	141	141	141	141	—	—	
At home	137	137	139	140	140	140	140	—	—	
Away from home	142	141	142	143	144	144	143	—	—	
Agricultural exports (\$ bil.) 2/	11.8	42.4	11.4	10.1	9.2	11.6	42.5	—	—	
Agricultural imports (\$ bil.) 2/	6.1	24.3	6.4	6.3	6.2	6.2	25.0	—	—	
Commercial production										
Red meat (mil. lb.)	10,379	40,795	9,716	9,993	10,388	10,408	40,505	9,955	41,375	
Poultry (mil. lb.)	6,844	26,398	6,542	6,987	7,030	6,920	27,479	6,800	28,740	
Eggs (mil. doz.)	1,501	5,883	1,458	1,471	1,485	1,530	5,944	1,480	5,990	
Milk (bil. lb.)	37.2	151.7	37.8	39.6	37.5	37.1	152.0	38.3	154.8	
Consumption, per capita										
Red meat and poultry (lb.)	53.6	208.4	50.4	51.1	52.8	53.8	208.1	51.0	211.9	
Corn beginning stocks (mil. bu.) 3/	2,738.6	—	1,100.3	7,908.4	5,678.2	3,709.4	—	2,112.7	—	
Corn use (mil. bu.) 3/	1,641.6	7,916.1	2,674.1	2,229.2	1,970.8	1,560.9	8,435.0	—	8,000	
Prices 4/										
Choice steers—Neb. Direct (\$/cwt)	75.86	75.36	80.65	79.78	73.75	70-76	76-77	71-77	71-77	
Barrows & gilts—IA, So. MN (\$/cwt)	42.48	43.03	44.92	47.59	48.05	45-51	47-48	45-51	45-51	
Broilers—12-city (cts./lb.)	53.3	52.6	53.1	55.8	56.8	50-56	54-55	49-55	50-56	
Eggs—NY gr. A large (cts./doz.)	71.4	65.4	75.6	73.4	69.6	69-75	72-73	68-74	67-73	
Milk—all at plant (\$/cwt)	13.10	13.09	12.33	12.9	12.67	12.60-13.60	12.60-12.90	11.20-12.20	11.35-12.35	
Wheat—KC HRW ordinary (\$/bu.)	3.73	3.91	3.82	3.48	—	—	—	—	—	
Corn—Chicago (\$/bu.)	2.12	2.41	2.18	2.27	—	—	—	—	—	
Soybeans—Chicago (\$/bu.)	6.52	5.68	5.63	5.95	—	—	—	—	—	
Cotton—Avg. spot 41-34 (cts./lb.)	50.4	63.9	55.2	55.7	—	—	—	—	—	
	1985	1986	1987	1988	1989	1990	1991	1992	1993 F	
Farm real estate values 5/										
Nominal (\$ per acre)	713	640	599	632	661	668	681	684	700	
Real (1982 \$)	657	568	518	530	533	517	505	487	486	

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages, Jan.-Dec. 5/ 1990-92 values as of January 1. 1986-89 values as of February 1. 1984-85 values as of April 1. F = forecast, — = not available

## U.S. &amp; Foreign Economic Data

Table 2.—U.S. Gross Domestic Product &amp; Related Data

	Annual			1992			1993	
	1990	1991	1992	II	III	IV	I	II R
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	5,548.1	5,722.9	6,038.5	5,991.4	6,059.5	6,194.4	6,261.6	6,327.6
Gross national product	5,567.8	5,737.1	6,045.8	5,996.3	6,067.3	6,191.9	6,262.1	6,327.1
Personal consumption expenditures	3,761.2	3,906.4	4,139.9	4,099.9	4,157.1	4,256.2	4,296.2	4,359.9
Durable goods	468.2	457.8	487.3	487.8	500.9	516.6	515.3	531.6
Nondurable goods	1,229.2	1,257.9	1,300.9	1,288.2	1,305.7	1,331.7	1,335.3	1,344.8
Clothing & shoes	207.3	213.0	228.2	224.5	230.7	236.1	233.1	235.2
Food & beverages	604.8	621.4	633.7	626.6	631.7	647.6	648.2	654.1
Services	2,063.8	2,190.7	2,341.6	2,323.8	2,350.5	2,407.9	2,445.5	2,483.4
Gross private domestic investment	808.9	736.9	798.5	799.7	802.2	833.3	874.1	874.1
Fixed investment	802.0	745.5	789.1	786.8	792.5	821.3	839.5	861.0
Change in business inventories	6.9	-8.6	7.3	12.9	9.7	12.0	34.6	13.1
Net exports of goods & services	-71.4	-19.6	-29.6	-33.9	-38.8	-38.9	-48.3	-65.1
Government purchases of goods & services	1,047.4	1,099.3	1,131.8	1,125.8	1,139.1	1,143.8	1,139.7	1,158.6
1987 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	4,897.3	4,881.4	4,986.3	4,958.5	4,998.2	5,068.3	5,078.2	5,102.1
Gross national product	4,916.5	4,874.5	4,994.0	4,962.2	5,008.4	5,068.4	5,080.7	5,104.1
Personal consumption expenditures	3,272.6	3,258.6	3,341.8	3,318.8	3,350.9	3,397.2	3,403.8	3,432.7
Durable goods	443.1	428.6	456.6	447.5	459.0	473.4	471.9	484.2
Nondurable goods	1,060.7	1,048.2	1,062.9	1,055.0	1,062.9	1,081.8	1,076.0	1,083.1
Clothing & shoes	185.2	184.7	193.7	191.1	195.4	200.0	194.8	197.8
Food & beverages	623.9	518.7	620.5	515.7	518.2	529.3	528.7	528.8
Services	1,768.8	1,783.8	1,822.3	1,814.3	1,829.0	1,842.0	1,855.9	1,865.4
Gross private domestic investment	746.8	675.7	732.9	737.0	739.6	763.0	803.0	803.6
Fixed investment	741.1	684.1	726.4	724.4	730.0	754.3	773.7	790.6
Change in business inventories	5.7	-8.4	6.5	12.6	9.6	8.7	29.3	13.0
Net exports of goods & services	-54.7	-19.1	-33.6	-36.0	-42.5	-38.8	-59.9	-75.2
Government purchases of goods & services	932.6	946.3	945.2	940.7	950.2	948.9	931.3	941.1
GDP implicit price deflator (% change)	4.4	3.9	2.9	3.0	1.0	3.3	3.6	2.3
Disposable personal income (\$ bil.)	4,050.5	4,230.5	4,500.2	4,459.2	4,497.0	4,657.6	4,597.5	4,692.2
Disposable per. income (1987 \$ bil.)	3,524.5	3,529.0	3,632.5	3,607.5	3,624.8	3,717.6	3,642.6	3,694.4
Per capita disposable per. income (\$)	16,205	16,741	17,615	17,481	17,577	18,153	17,876	18,196
Per capita dis. per. income (1987 \$)	14,101	13,965	14,219	14,142	14,169	14,490	14,163	14,326
U.S. population, total, incl. military abroad (mil.) *	249.9	252.7	255.5	255.0	255.7	256.5	257.1	257.7
Civilian population (mil.) *	247.8	250.5	253.5	253.0	253.8	254.6	255.3	255.9
	Annual			1992			1993	
	1990	1991	1992	Aug	May	June	July	Aug
Monthly data seasonally adjusted								
Industrial production (1987=100)	108.0	104.1	106.5	106.6	110.2	110.4	110.9	111.1
Leading economic indicators (1982=100)	143.8	143.4	148.9	148.6	161.4	161.5	151.6	153.1
Civilian employment (mil. persons)	117.9	116.9	117.6	117.8	119.3	119.2	119.3	119.7
Civilian unemployment rate (%)	5.5	6.7	7.4	7.6	6.9	7.0	6.8	6.7
Personal income (\$ bil. annual rate)	4,673.8	4,850.9	5,144.9	5,118.4	5,380.4	5,373.6	5,357.8	5,428.1
Money stock—M2 (daily avg.) (\$ bil.) 1/	3,345.5	3,445.8	3,497.8	3,472.7	3,507.7	3,514.9	3,521.3	3,526.8
Three-month Treasury bill rate (%)	7.51	5.42	3.45	3.14	2.96	3.10	3.05	3.05
AAA corporate bond yield (Moody's) (%)	9.32	8.77	8.14	7.95	7.43	7.33	7.17	6.85
Housing starts (1,000) 2/	1,193	1,014	1,200	1,229	1,248	1,248	1,227	1,323
Auto sales at retail, total (mil.)	9.5	8.4	8.4	8.0	9.1	8.8	8.6	8.6
Business inventory/sales ratio	1.53	1.54	1.50	1.52	1.47	1.46	1.47	—
Sales of all retail stores (\$bil.) 3/	1,849.8	1,865.8	1,956.5	183.2	171.7	172.6	173.1	173.5
Nondurable goods stores (\$ bil.)	1,178.8	1,211.6	1,257.3	104.9	108.0	108.1	108.1	108.1
Food stores (\$ bil.)	369.8	376.9	384.0	32.2	32.3	32.7	32.7	33.1
Eating & drinking places (\$ bil.)	191.0	196.9	201.9	16.6	17.6	17.5	17.5	17.3
Apparel & accessory stores (\$ bil.)	95.8	97.5	105.0	8.8	8.9	8.9	8.9	8.9

1/ Annual data as of December of the year listed. 2/ Private, including farm. 3/ Annual total. P = preliminary. — = not available.

Note: \* Population estimates based on 1990 census.

Information contact: Ann Duncan (202) 219-0313.

Table 3.—Foreign Economic Growth, Inflation, &amp; Exports

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F	1994 F	Average 1983-92
Annual percent change													
World, less U.S.													
Real GDP	2.4	3.6	3.4	3.0	3.5	4.4	3.5	3.0	1.1	1.1	0.7	2.4	2.9
GDP deflator	8.8	8.2	8.6	7.8	9.0	10.6	10.8	23.8	16.1	49.7	38.9	31.0	15.3
Real exports	2.7	9.7	3.8	2.1	5.0	7.0	7.8	6.2	3.0	2.4	2.9	4.3	5.0
Developed less U.S.													
Real GDP	2.1	3.2	3.4	2.7	3.2	4.5	3.6	3.5	1.4	1.0	0.0	1.9	2.9
GDP deflator	6.6	6.2	4.6	4.3	2.9	3.3	4.1	3.2	3.4	4.5	2.4	2.5	4.2
Real exports	3.5	10.8	5.2	-0.2	2.9	6.2	7.9	6.9	3.9	2.8	2.0	3.7	5.0
Eastern Europe & F.S.U.													
Real GDP	3.8	4.0	2.3	3.6	2.6	3.8	1.5	-3.1	-13.3	-13.3	-7.0	-1.5	-0.8
GDP deflator 1/	4.2	5.0	6.4	8.1	12.8	35.3	41.3	192.3	68.9	204.6	90.4	53.4	57.9
Real exports	4.6	6.2	-4.0	9.1	7.6	8.5	-5.3	-6.0	-22.6	-13.4	-3.4	0.6	-1.8
Developing													
Real GDP	3.1	4.7	4.0	3.9	4.5	4.4	3.6	3.2	3.7	4.5	4.4	4.7	4.0
GDP deflator	38.7	37.3	35.4	25.5	33.1	26.4	19.2	18.9	14.8	14.9	14.4	14.0	26.3
Real exports	0.4	7.2	1.7	7.5	11.1	9.4	9.0	5.6	5.7	4.9	6.6	6.4	6.2
Asia													
Real GDP	8.2	7.9	5.9	7.2	8.6	9.1	5.5	5.7	6.0	6.7	6.1	6.3	7.0
GDP deflator	6.3	7.5	5.9	4.4	7.8	8.2	6.1	8.4	8.5	8.8	7.4	8.1	7.2
Real exports	6.4	11.3	2.9	19.0	15.8	14.9	8.2	7.4	9.5	8.3	8.9	8.5	10.4
Latin America													
Real GDP	-2.7	3.7	3.6	4.4	3.0	0.0	1.3	-1.3	2.6	2.1	2.4	2.9	1.7
GDP deflator 1/	30.3	40.8	69.0	62.8	125.5	66.6	35.9	29.6	22.7	23.0	21.8	19.9	50.8
Real exports	2.0	12.0	2.0	0.0	8.0	6.8	10.4	3.2	3.3	3.1	6.4	7.3	5.1
Africa													
Real GDP	1.1	2.2	2.3	1.4	0.6	2.9	2.8	0.9	2.2	1.1	2.3	3.2	1.7
GDP deflator	17.0	13.1	12.2	8.5	25.7	17.4	19.6	15.0	18.2	13.8	12.1	13.5	16.1
Real exports	-5.3	-1.5	3.5	-1.0	0.0	2.9	5.0	8.4	2.1	0.1	4.8	2.8	1.4
Middle East													
Real GDP	4.5	1.2	1.7	-3.6	-0.1	-0.2	2.5	5.8	2.9	4.9	4.2	3.8	2.0
GDP deflator	-4.5	1.2	3.1	6.7	14.6	9.5	13.5	20.4	2.7	9.6	13.1	11.4	7.6
Real exports	-19.6	-6.7	-7.1	-3.8	24.6	4.8	21.0	6.0	2.9	13.8	4.6	15.7	3.6

1/ Excludes Yugoslavia, Argentina, Brazil, &amp; Peru starting in 1989. E = estimate. F = forecast.

Information contact: Alberto Jerardo, (202) 219-0705.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1992	1993					
	1990	1991	1992	Sept	Apr	May	June	July	Aug P	Sept P
1977 = 100										
Prices received										
All farm products	149	145	140	139	146	144	140	140	142	145
All crops	127	129	121	117	126	120	112	118	123	128
Food grains	123	115	139	130	130	124	113	114	118	123
Feed grains & hay	123	117	116	109	113	113	110	113	115	112
Feed grains	118	115	114	107	107	106	104	110	112	108
Cotton	107	108	88	88	90	88	88	89	88	85
Tobacco	152	161	154	163	141	141	141	141	143	153
Oil-bearing crops	94	91	86	85	91	92	93	101	101	95
Fruit, all	186	202	181	155	133	142	146	142	192	256
Fresh market 1/	196	285	185	154	127	137	148	143	203	282
Commercial vegetables	142	135	165	161	241	182	123	140	147	167
Fresh market	144	140	157	168	278	197	116	143	152	186
Potatoes & dry beans	189	141	124	127	175	177	154	184	144	136
Livestock & products	170	161	157	159	167	168	166	161	162	161
Meat animals	193	186	176	177	191	192	188	182	183	183
Dairy products	141	128	135	139	130	134	135	132	129	131
Poultry & eggs	131	124	117	124	131	130	129	124	130	126
Prices paid										
Commodities & services,										
interest, taxes, & wage rates	184	189	191	192	197	197	197	197	197	197
Production items	171	174	174	175	179	179	179	178	178	178
Feed	129	123	123	—	124	—	—	124	—	—
Feeder livestock	213	214	202	—	222	—	—	218	—	—
Seed	165	163	162	—	169	—	—	169	—	—
Fertilizer	131	134	131	—	129	—	—	129	—	—
Agricultural chemicals	139	151	150	—	166	—	—	166	—	—
Fuels & energy	204	203	199	—	199	—	—	198	—	—
Farm & motor supplies	154	157	160	—	160	—	—	159	—	—
Autos & trucks	231	244	258	—	272	—	—	275	—	—
Tractors & self-propelled machinery	202	211	219	—	223	—	—	223	—	—
Other machinery	216	226	233	—	245	—	—	245	—	—
Building & fencing	144	146	150	—	162	—	—	156	—	—
Farm services & cash rent	168	171	172	—	172	—	—	172	—	—
Int. payable per acre on farm real estate debt	177	169	167	—	164	—	—	164	—	—
Taxes payable per acre on farm real estate	158	164	171	—	178	—	—	178	—	—
Wage rates (seasonally adjusted)	191	200	208	—	223	—	—	223	—	—
Production items, interest, taxes, & wage rates	172	175	176	—	181	—	—	180	—	—
Ratio, prices received to prices paid (%) 2/	81	77	73	72	74	73	71	71	72	74
Prices received (1910-14=100)	681	665	637	633	669	660	639	639	651	663
Prices paid, etc. (parity index) (1910-14=100)	1,267	1,298	1,317	—	1,357	—	—	1,358	—	—
Parity ratio (1910-14=100) (%)2/	54	51	49	—	49	—	—	47	—	—

1/ Fresh market for noncitrus; fresh market &amp; processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities &amp; services, interest, taxes, &amp; wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly &amp; will be published in January, April, July, &amp; October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1993						
	1990	1991	1992	1992 Sept	Apr	May	June	July	Aug R	Sept P
<b>CROPS</b>										
All wheat (\$/bu.)	2.61	3.00	3.24	3.20	3.25	3.10	2.82	2.85	2.95	3.09
Rice, rough (\$/cwt)	8.70	7.58	5.95	6.41	5.52	5.24	5.02	4.92	4.98	5.09
Corn (\$/bu.)	2.28	2.37	2.05	2.16	2.16	2.13	2.09	2.22	2.25	2.19
Sorghum (\$/cwt)	3.79	4.01	3.30	3.71	3.38	3.34	3.41	3.72	3.77	3.61
All hay, baled (\$/ton)	80.80	71.20	73.20	89.20	83.80	86.30	80.50	77.20	77.40	77.60
Soybeans (\$/bu.)	5.74	5.58	5.50	5.36	5.73	5.81	5.90	6.57	6.55	6.11
Cotton, upland (cts./lb.)	67.1	56.8	—	53.1	54.3	53.2	53.0	54.1	53.1	51.6
Potatoes (\$/cwt)	6.08	4.96	5.28	4.89	7.47	7.63	6.57	7.93	5.91	5.40
Lettuce (\$/cwt) 2/	11.50	11.40	12.40	21.00	37.50	12.50	11.50	16.90	15.20	18.70
Tomatoes fresh (\$/cwt) 2/	27.30	31.80	36.20	29.30	45.20	58.50	21.90	20.00	33.30	35.30
Onions (\$/cwt)	10.50	12.50	12.80	12.70	31.70	24.10	10.30	13.10	15.00	13.80
Dry edible beans (\$/cwt)	18.50	15.80	20.70	20.20	18.10	17.70	16.50	18.70	19.10	20.60
Apples for fresh use (cts./lb.)	20.9	25.1	19.2	27.1	14.7	15.3	16.1	18.0	23.1	26.5
Pears for fresh use (\$/ton)	360.00	385.00	378.00	364.00	429.00	476.00	538.00	401.00	353.00	400.00
Oranges, all uses (\$/box) 3/	6.13	6.78	5.79	0.94	3.23	3.65	3.89	4.10	5.44	10.52
Grapefruit, all uses (\$/box) 3/	5.86	5.55	6.25	4.58	2.13	1.62	0.98	0.14	2.44	3.51
<b>LIVESTOCK</b>										
Beef cattle (\$/cwt)	74.80	72.90	71.38	71.80	77.40	76.90	74.70	72.60	72.60	72.10
Calves (\$/cwt)	96.50	99.90	89.65	87.40	99.80	100.00	99.00	95.90	95.10	94.30
Hogs (\$/cwt)	54.00	48.80	41.88	42.10	45.50	47.00	48.20	45.90	47.50	48.20
Lambs (\$/cwt)	56.00	52.50	60.76	56.70	68.50	61.80	56.80	54.20	59.40	65.40
All milk, sold to plants (\$/cwt)	13.74	12.27	13.15	13.50	12.60	13.00	13.10	12.80	12.50	12.70
Milk, manuf. grade (\$/cwt)	12.34	11.05	11.91	12.20	12.00	12.40	11.90	11.30	11.00	11.40
Broilers (cts./lb.)	32.4	31.0	30.8	32.0	33.2	35.7	34.4	35.0	36.3	36.5
Eggs (cts./doz.) 4/	70.4	66.2	57.7	59.6	69.3	62.9	65.4	57.6	61.3	56.1
Turkeys (cts./lb.)	38.4	37.7	38.0	37.5	37.7	38.4	37.3	38.9	39.5	40.4
Wool (cts./lb.) 5/	80.0	55.0	74.0	59.0	45.5	55.0	55.1	48.6	38.8	37.8

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Excludes Hawaii. 3/ Equivalent on-tree returns.  
4/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 5/ Average local market price, excluding incentive payments.  
P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 219-0313.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1992	1993							
	1992	Sept	Feb	Mar	Apr	May	June	July	Aug	Sept
			1982-84=100							
Consumer Price Index, all items	140.3	141.3	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1
Consumer Price Index, less food	140.8	141.8	143.7	144.2	144.6	144.8	145.1	145.2	145.6	145.1
<b>All food</b>	<b>137.9</b>	<b>138.5</b>	<b>139.9</b>	<b>140.1</b>	<b>140.6</b>	<b>141.1</b>	<b>140.4</b>	<b>140.3</b>	<b>140.8</b>	<b>141.1</b>
Food away from home	140.7	141.2	142.2	142.4	142.7	142.9	143.2	143.4	143.6	143.6
Food at home	136.8	137.4	139.1	139.4	140.0	140.7	139.3	139.1	139.7	140.0
Meats 1/	130.7	130.9	132.1	133.1	133.8	134.7	134.9	135.5	135.6	135.5
Beef & veal	132.3	131.8	135.6	136.3	137.6	138.2	137.6	137.4	137.4	137.0
Pork	127.8	129.4	127.2	129.0	128.5	130.5	132.1	134.2	133.8	134.6
Poultry	131.4	134.0	133.1	135.7	135.2	138.6	136.5	136.0	137.5	138.0
Fish	151.7	151.2	157.5	157.6	159.7	154.7	154.8	153.2	154.1	155.4
Eggs	108.3	111.6	115.6	120.3	126.9	114.9	116.4	115.1	117.4	113.4
Dairy products 2/	128.5	129.7	128.8	128.8	128.0	128.0	129.8	130.2	130.5	129.6
Fats & oils 3/	129.8	129.9	130.7	130.2	130.2	129.4	130.1	130.4	130.1	130.0
Fresh fruit	184.2	189.2	187.0	184.4	184.6	188.0	176.1	178.7	184.7	193.3
Processed fruit	137.7	138.0	134.5	132.0	132.1	130.7	129.7	131.0	132.2	132.4
Fresh vegetables	157.9	152.8	171.1	173.7	179.3	189.6	167.1	155.8	156.1	157.4
Potatoes	141.5	153.1	138.9	142.4	152.0	156.0	163.4	165.2	165.8	156.1
Processed vegetables	128.8	129.1	128.9	130.2	130.4	129.9	130.9	131.2	131.4	130.9
Cereals & bakery products	151.5	152.6	154.9	154.8	155.4	156.3	156.7	157.2	157.6	157.7
Sugar & sweets	133.1	133.7	133.3	132.8	133.2	133.4	133.1	133.2	133.7	133.3
<b>Beverages, nonalcoholic</b>	<b>114.3</b>	<b>114.2</b>	<b>115.1</b>	<b>114.8</b>	<b>114.2</b>	<b>115.0</b>	<b>114.6</b>	<b>114.4</b>	<b>114.1</b>	<b>113.8</b>
<b>Apparel</b>										
Apparel, commodities less footwear	130.2	131.7	131.9	135.2	135.9	133.4	129.7	126.9	130.0	133.0
Footwear	125.0	126.3	125.2	126.3	127.1	127.8	125.6	123.9	123.5	126.2
Tobacco & smoking products	219.8	224.0	235.6	236.3	237.3	237.9	236.2	235.8	227.9	215.1
<b>Beverages, alcoholic</b>	<b>147.3</b>	<b>148.0</b>	<b>149.1</b>	<b>149.4</b>	<b>149.7</b>	<b>149.5</b>	<b>149.6</b>	<b>149.6</b>	<b>149.7</b>	<b>149.9</b>

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 219-0313.

Table 7.—Producer Price Indexes, U.S.<sup>1</sup> Average (Not Seasonally Adjusted)

	Annual			1992	1993					
	1990	1991	1992	Aug	Mar	Apr R	May	June	July	Aug
					1982 = 100					
All commodities	116.3	116.5	117.2	117.7	118.7	119.3	119.7	119.8	119.3	119.8
Finished goods 1/	119.2	121.7	123.2	123.6	124.7	125.5	125.7	125.6	125.3	124.3
All foods 2/	123.2	122.2	120.8	120.8	122.6	124.4	124.8	123.2	123.1	123.3
Consumer foods	124.4	124.1	123.3	123.4	124.8	126.5	126.7	125.4	125.0	125.4
Fresh fruit & melons	118.1	129.9	83.8	78.6	74.2	74.0	89.9	82.3	79.5	84.2
Fresh & dried vegetables	118.1	103.8	115.0	118.8	132.5	174.0	183.7	104.5	116.3	117.6
Dried fruit	106.7	111.8	114.4	114.2	116.4	116.2	115.9	115.5	117.1	119.4
Canned fruit & juice	127.0	128.6	134.5	135.5	125.8	124.6	124.3	124.4	125.7	126.1
Frozen fruit & juice	139.0	116.3	125.8	123.1	104.6	104.6	105.8	112.4	117.0	114.5
Fresh veg. excl. potatoes	107.8	100.2	116.4	114.8	117.4	178.5	163.5	80.6	88.4	110.5
Canned veg. & juices	116.7	112.9	109.6	109.6	109.7	109.1	108.8	109.5	110.9	109.5
Frozen vegetables	118.4	117.6	118.4	115.4	117.9	118.7	119.9	120.8	121.2	121.1
Potatoes	157.3	125.7	118.3	171.8	131.3	144.0	142.3	147.5	137.3	143.7
Eggs for fresh use (1991=100)	3/	3/	78.6	73.7	99.0	91.9	82.9	87.6	77.5	89.0
Bakery products	141.0	146.6	152.5	153.2	155.6	156.1	155.9	156.4	156.6	156.8
Meats	117.0	113.5	106.7	106.7	111.7	113.9	113.9	113.4	111.2	109.9
Beef & veal	116.0	112.2	109.7	107.8	116.4	118.3	119.2	118.4	112.6	110.9
Pork	119.8	113.4	98.5	101.7	103.9	107.9	108.3	109.2	107.4	105.8
Processed poultry	113.6	109.9	109.1	111.8	109.1	108.9	111.4	111.4	110.1	112.9
Fish	147.2	149.5	153.0	147.8	166.3	161.2	159.0	156.2	147.2	146.2
Dairy products	117.2	114.6	119.0	120.0	117.2	117.2	118.4	119.8	119.4	117.9
Processed fruits & vegetables	124.7	119.6	120.8	120.5	118.4	118.1	118.3	117.5	119.0	118.4
Shortening & cooking oil	123.2	116.5	114.9	112.4	117.9	119.7	119.8	119.2	127.9	128.0
Soft drinks	122.3	125.5	125.7	125.0	127.6	126.7	126.3	126.6	125.5	126.0
Consumer finished goods less foods	115.3	118.7	120.8	121.5	122.1	122.7	123.2	123.5	123.0	121.0
Beverages, alcoholic	117.2	123.7	126.1	126.6	126.5	126.4	126.4	125.6	125.7	126.0
Apparel	117.5	119.6	122.2	122.3	123.2	123.3	123.2	122.9	123.5	123.2
Footwear	125.6	128.6	131.9	132.5	133.9	134.5	134.2	134.1	134.5	134.8
Tobacco products	221.4	249.7	275.3	285.9	292.2	296.2	296.7	290.2	287.3	211.3
Intermediate materials 4/	114.5	114.4	114.7	115.5	116.0	116.3	116.2	116.7	116.6	116.6
Materials for food manufacturing	117.9	115.3	113.9	114.0	113.5	114.9	115.7	115.1	116.6	116.3
Flour	103.6	96.8	109.3	101.6	109.1	110.5	107.4	106.2	105.7	109.6
Refined sugar 5/	122.7	121.6	120.0	120.4	118.3	118.4	118.5	117.4	119.1	119.9
Crude vegetable oils	115.8	103.0	97.1	89.7	103.1	104.0	104.1	100.0	114.9	114.2
Crude materials 6/	108.9	101.2	100.4	100.5	102.6	103.9	106.3	104.5	102.7	101.6
Foodstuffs & feedstuffs	113.1	105.5	105.1	103.7	108.3	110.4	112.1	107.3	107.7	108.1
Fruits & vegetables & nuts 7/	117.5	114.7	96.8	95.9	101.6	118.3	120.3	93.5	97.2	99.5
Grains	97.4	92.0	97.3	88.5	89.3	93.7	91.1	85.3	91.2	93.9
Livestock	115.8	107.9	104.7	104.2	112.6	113.0	112.8	109.8	105.0	107.1
Poultry, live	118.9	111.2	112.8	120.5	116.1	116.5	132.3	118.9	124.4	125.9
Fibers, plant & animal	117.8	115.1	89.8	96.6	94.2	91.5	93.3	90.5	90.8	88.5
Fluid milk	100.8	89.5	96.3	100.1	89.4	92.5	95.0	97.5	96.6	93.3
Oilseeds	112.1	106.4	107.5	104.9	108.3	112.2	114.2	109.6	127.9	123.8
Tobacco, leaf	95.8	101.1	101.0	96.3	108.7	97.6	91.8	91.8	91.8	93.1
Sugar, raw cane	119.2	113.7	112.1	111.7	112.2	113.8	111.1	112.4	114.2	115.9

1/ Commodities ready for sale to ultimate consumer. 2/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). 3/ New index beginning Dec. 1991. 4/ Commodities requiring further processing to become finished goods. 5/ All types & sizes of refined sugar. 6/ Products entering market for the first time that have not been manufactured at that point. 7/ Fresh & dried. R = revised.

Information contact: Ann Duncan (202) 219-0313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1992	1993					
	1990	1991	1992	Aug	Mar	Apr	May	June	July	Aug
<b>Market basket 1/</b>										
Retail cost (1982-84=100)	133.5	137.4	138.4	138.4	141.0	141.7	142.6	141.1	141.0	141.8
Farm value (1982-84=100)	113.1	108.1	103.4	104.3	106.0	108.4	108.9	104.9	103.8	104.4
Farm-retail spread (1982-84=100)	144.5	154.2	157.3	158.7	159.9	159.5	160.7	160.6	161.0	161.9
Farm value-retail cost (%)	29.7	27.0	26.2	26.4	26.3	26.8	26.7	26.0	25.8	25.8
<b>Meat products</b>										
Retail cost (1982-84=100)	128.5	132.5	130.7	130.6	133.1	133.8	134.7	134.9	135.5	135.6
Farm value (1982-84=100)	116.8	110.0	104.5	104.7	113.0	115.1	113.2	111.8	108.0	105.1
Farm-retail spread (1982-84=100)	140.4	155.6	157.5	157.1	153.7	153.0	158.8	158.6	163.7	166.9
Farm value-retail cost (%)	46.0	42.0	40.5	40.6	43.0	43.6	42.5	42.0	40.4	39.2
<b>Dairy products</b>										
Retail cost (1982-84=100)	126.5	125.1	128.5	129.2	128.8	128.0	128.0	129.8	130.2	130.5
Farm value (1982-84=100)	101.7	90.0	95.9	99.1	89.4	89.1	92.4	98.5	95.6	94.4
Farm-retail spread (1982-84=100)	149.5	157.5	158.6	157.0	165.1	163.9	160.8	160.5	162.1	163.8
Farm value-retail cost (%)	38.5	34.5	35.8	36.8	33.3	33.4	34.6	35.7	35.2	34.7
<b>Poultry</b>										
Retail cost (1982-84=100)	132.5	131.5	131.4	133.7	135.7	135.2	136.6	136.5	136.0	137.5
Farm value (1982-84=100)	107.6	102.5	104.0	112.1	105.8	108.2	115.4	111.3	113.7	117.5
Farm-retail spread (1982-84=100)	181.1	164.9	163.0	158.5	170.1	166.3	161.1	165.5	161.7	160.5
Farm value-retail cost (%)	43.5	41.7	42.4	44.9	41.7	42.8	45.2	43.6	44.7	45.7
<b>Eggs</b>										
Retail cost (1982-84=100)	124.1	121.2	106.3	102.2	120.3	126.9	114.9	116.4	115.1	117.4
Farm value (1982-84=100)	108.0	100.9	77.8	70.7	105.9	98.1	83.5	88.5	80.8	88.0
Farm-retail spread (1982-84=100)	153.2	157.6	163.2	158.9	148.2	178.5	171.3	166.5	176.7	170.2
Farm value-retail cost (%)	55.9	53.5	46.1	44.4	56.5	49.7	46.7	48.9	45.1	48.2
<b>Cereal &amp; bakery products</b>										
Retail cost (1982-84=100)	140.0	145.8	151.5	153.1	154.6	155.4	156.3	156.7	157.2	157.5
Farm value (1982-84=100)	90.5	85.3	84.7	87.7	90.9	91.2	88.0	83.5	85.5	88.1
Farm-retail spread (1982-84=100)	146.9	154.3	159.4	162.2	163.5	164.4	165.6	166.9	167.2	167.2
Farm value-retail cost (%)	7.9	7.2	7.7	7.0	7.2	7.2	6.9	6.5	6.7	6.8
<b>Fresh fruits</b>										
Retail cost (1982-84=100)	174.6	200.1	189.6	183.7	188.5	188.5	193.1	180.9	183.5	192.1
Farm value (1982-84=100)	128.3	174.4	122.5	119.7	132.2	132.5	132.8	133.4	121.2	134.2
Farm-retail spread (1982-84=100)	195.9	211.9	220.6	213.2	214.5	214.4	220.9	202.6	212.3	218.8
Farm value-retail cost (%)	23.2	27.5	20.4	20.6	22.2	22.2	21.7	23.3	20.9	22.1
<b>Fresh vegetables</b>										
Retail cost (1982-84=100)	151.1	154.4	157.9	153.8	173.7	179.3	189.6	167.1	155.8	156.1
Farm value (1982-84=100)	124.4	110.8	120.5	122.7	129.4	163.6	173.3	107.3	109.4	118.6
Farm-retail spread (1982-84=100)	164.9	176.8	177.2	169.8	196.5	187.4	198.0	197.8	179.7	175.4
Farm value-retail cost (%)	28.0	24.4	25.9	27.1	25.3	31.0	31.0	21.8	23.8	25.8
<b>Processed fruits &amp; vegetables</b>										
Retail cost (1982-84=100)	132.7	130.2	133.7	134.6	131.1	131.2	130.2	130.0	131.0	131.7
Farm value (1982-84=100)	144.0	120.6	129.0	129.0	104.9	102.7	102.2	101.4	103.8	103.7
Farm-retail spread (1982-84=100)	129.1	133.2	135.2	136.3	139.3	140.1	138.9	138.9	139.5	140.4
Farm value-retail cost (%)	25.8	22.0	22.9	22.8	19.0	18.8	18.7	18.6	18.8	18.7
<b>Fats &amp; oils</b>										
Retail cost (1982-84=100)	126.3	131.7	129.8	129.5	130.2	130.2	129.4	130.1	130.4	130.1
Farm value (1982-84=100)	107.1	98.0	93.2	88.7	98.4	101.0	101.1	101.6	114.3	107.8
Farm-retail spread (1982-84=100)	133.4	144.2	143.3	144.5	141.9	141.0	139.8	140.6	136.3	138.3
Farm value-retail cost (%)	22.8	20.0	19.3	18.4	20.3	20.9	21.0	21.0	23.6	22.3

	Annual			1992	1993					
	1990	1991	1992	Sept	Apr	May	June	July	Aug	Sept
<b>Beef, Choice</b>										
Retail price 2/ (cts./lb.)	281.0	288.3	284.6	284.1	299.1	304.2	297.9	296.7	290.9	288.4
Wholesale value 3/ (cts.)	189.6	182.5	179.6	175.9	193.5	195.3	185.2	175.9	179.4	176.3
Net farm value 4/ (cts.)	168.4	160.2	161.8	159.6	177.2	175.5	165.8	157.8	160.1	156.2
Farm-retail spread (cts.)	112.6	128.1	122.8	124.5	121.9	128.7	132.1	139.1	130.8	132.2
Wholesale-retail 5/ (cts.)	91.4	105.8	105.0	108.2	105.6	106.9	112.7	120.8	111.5	112.1
Farm-wholesale 6/ (cts.)	21.2	22.3	17.8	16.3	16.3	19.8	19.4	18.3	19.3	20.1
Farm value-retail price (%)	60	58	57	58	59	58	56	53	55	54
<b>Pork</b>										
Retail price 2/ (cts./lb.)	212.6	211.9	198.0	199.6	191.4	194.8	196.5	200.2	198.7	201.6
Wholesale value 3/ (cts.)	118.3	108.9	98.9	99.6	102.3	102.6	105.7	102.8	105.8	105.5
Net farm value 4/ (cts.)	87.2	78.4	67.8	67.4	71.9	74.9	77.0	73.6	76.9	77.0
Farm-retail spread (cts.)	125.4	133.5	130.2	132.2	119.5	119.9	119.5	126.6	121.8	124.6
Wholesale-retail 5/ (cts.)	94.3	103.0	99.1	100.0	89.1	92.2	90.8	97.4	92.9	96.1
Farm-wholesale 6/ (cts.)	31.1	30.5	31.1	32.2	30.4	27.7	28.7	29.2	28.9	28.5
Farm value-retail price (%)	41	37	34	34	38	38	39	37	39	38

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef. Prices from BLS. 3/ Value of wholesale (boxed beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts, adjusted for transportation costs & byproduct values. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as wholesaling, & in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 219-0870, Larry Duewer (202) 219-0712.

Table 9.—Price<sup>1</sup> Indexes of Food Marketing Costs

(See the June 1993 issue.)

Information contact: Denis Dunham (202) 219-0870.

## Livestock &amp; Products

Table 10.—U.S. Meat Supply &amp; Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
	Million pounds 4/						Pounds		
<b>Beef</b>									
1990	335	22,743	2,356	25,434	1,008	397	24,031	67.8	78.55
1991	397	22,917	2,406	25,720	1,188	419	24,113	66.8	74.28
1992	419	23,088	2,440	25,945	1,324	360	24,261	66.5	75.36
1993 F	360	23,171	2,410	25,941	1,300	350	24,291	65.9	76-77
<b>Pork</b>									
1990	313	15,354	898	16,565	238	296	16,031	49.8	55.32
1991	296	15,999	775	17,070	283	388	16,399	50.4	49.69
1992	388	17,234	645	18,267	407	385	17,475	53.1	43.03
1993 F	385	18,892	670	17,947	410	385	17,152	51.8	47-48
<b>Veal 5/</b>									
1990	4	327	0	331	0	8	325	1.1	66.51
1991	6	306	0	312	0	7	305	1.0	99.94
1992	7	310	0	317	0	5	312	1.0	89.38
1993 F	5	282	0	287	0	5	282	0.9	85-86
<b>Lamb &amp; mutton</b>									
1990	8	363	41	412	6	8	397	1.4	55.54
1991	8	363	41	412	10	6	396	1.4	53.21
1992	6	348	50	404	8	8	388	1.4	61.00
1993 F	8	343	45	396	8	8	380	1.3	65-66
<b>Total red meat</b>									
1990	660	38,787	3,295	42,742	1,250	707	40,784	120.0	---
1991	707	39,585	3,223	43,515	1,481	820	41,214	119.6	---
1992	820	40,978	3,135	44,933	1,739	758	42,436	122.0	---
1993 F	758	40,688	3,125	44,571	1,718	748	42,105	119.7	---
<b>Broilers</b>									
1990	38	18,430	0	18,468	1,143	26	17,299	61.0	54.8
1991	26	19,591	0	19,617	1,261	36	18,320	63.7	52.0
1992	36	20,904	0	20,940	1,489	33	19,418	66.8	52.6
1993 F	33	21,932	0	21,965	1,765	33	20,167	69.1	54-55
<b>Mature chicken</b>									
1990	189	523	0	713	25	224	464	1.9	---
1991	224	508	0	732	28	274	429	1.7	---
1992	274	520	0	794	41	345	408	1.6	---
1993 F	345	512	0	857	60	325	472	1.8	---
<b>Turkeys</b>									
1990	236	4,514	0	4,750	54	306	4,390	17.6	63.2
1991	306	4,603	0	4,909	103	264	4,541	18.0	61.3
1992	264	4,777	0	5,041	171	272	4,599	18.0	60.2
1993 F	272	4,824	0	5,096	200	260	4,636	18.1	61-62
<b>Total poultry</b>									
1990	463	23,468	0	23,931	1,222	557	22,152	80.5	---
1991	557	24,701	0	25,258	1,392	575	23,291	83.4	---
1992	575	26,201	0	26,775	1,701	650	24,425	86.4	---
1993 F	650	27,268	0	27,918	2,025	618	25,275	88.5	---
<b>Red meat &amp; poultry</b>									
1990	1,123	62,255	3,295	66,673	2,473	1,264	62,937	200.5	---
1991	1,284	64,286	3,223	68,772	2,873	1,395	64,504	202.9	---
1992	1,395	67,179	3,135	71,708	3,440	1,408	66,861	208.4	---
1993 F	1,408	67,956	3,125	72,488	3,743	1,366	67,379	208.1	---

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was 70.5). 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Medium # 1, Nebraska Direct 1,100-1,300 lb.; pork: barrows & gilts, Iowa, Southern Minnesota; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. --- = not available.

Information contacts: Polly Cochran or Maxine Davis (202) 219-0767.

Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		
								Total	Per capita	Wholesale price*
								No.	Cts./doz.	
1987	10.4	5,888.2	5.6	5,884.2	111.2	599.1	14.4	5,159.5	254.9	61.6
1988	14.4	5,784.2	5.3	5,803.9	141.6	605.9	15.2	5,041.0	248.9	62.1
1989	15.2	5,598.2	25.2	5,638.5	91.6	643.9	10.7	4,892.4	237.3	61.9
1990	10.7	5,665.6	9.1	5,685.3	100.5	678.5	11.6	4,894.7	235.0	62.2
1991	11.6	5,779.3	2.3	5,793.3	154.3	708.1	13.0	4,917.9	233.5	77.5
1992	13.0	5,882.7	4.3	5,999.9	157.0	728.4	13.5	5,001.0	235.0	65.4
1993 F	13.5	5,939.0	5.0	5,962.5	152.6	762.7	12.0	5,035.2	234.1	72-73

\* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 219-0767

Table 12.—U.S. Milk Supply & Use<sup>1/</sup>

	Produc- tion	Farm use	Commercial			Total commen- cial supply	CCC net re- movals	Commercial		All milk price 1/ \$/cwt	CCC net removals			
			Farm market- ings	Beg. stock	Im- ports			Ending stocks	Disap- pear- ance		Skim solids basis	Total solids basis 2/		
			Billion pounds (milkfat basis)								Billion pounds			
1985	143.0	2.5	140.8	4.8	2.8	148.2	13.3	4.5	130.4	12.76	17.2	15.6		
1986	143.1	2.4	140.7	4.5	2.7	147.9	10.8	4.1	133.0	12.51	14.3	12.9		
1987	142.7	2.3	140.5	4.1	2.5	147.1	8.8	4.6	135.7	12.54	9.3	8.3		
1988	145.2	2.2	142.9	4.6	2.4	149.9	9.1	4.3	138.5	12.26	5.5	6.9		
1989	144.2	2.1	142.2	4.3	2.5	149.0	9.4	4.1	135.4	13.56	0.4	4.0		
1990	148.3	2.0	146.3	4.1	2.7	153.1	9.0	5.1	138.9	13.68	1.6	4.6		
1991	148.5	2.0	146.5	5.1	2.6	154.3	10.4	4.5	139.4	12.24	3.9	6.5		
1992	151.7	1.9	149.8	4.5	2.5	156.7	10.1	4.7	142.0	13.09	2.4	5.4		
1993 F	152.0	1.9	150.1	4.7	2.6	157.4	7.5	4.6	145.3	12.78	5.1	6.1		

<sup>1/</sup> Delivered to plants & dealers; does not reflect deductions. <sup>2/</sup> Arbitrarily weighted average of milkfat basis (40 percent) & skim solids basis (60 percent). F = forecast.

Information contact: Jim Miller (202) 219-0770.

Table 13.—Poultry &amp; Eggs

	Annual			1992 Aug	1993					
	1990	1991	1992		Mar	Apr	May	June	July	Aug
<b>Broilers</b>										
Federally inspected slaughter, certified (mil. lb.)	18,555.0	19,727.7	21,052.4	1,763.3	1,897.1	1,867.2	1,786.7	1,979.4	1,801.8	1,908.8
Wholesale price, 12-city (cts./lb.)	54.8	52.0	52.6	56.1	54.0	54.7	57.8	55.0	55.4	57.8
Price of grower feed (\$/ton)	218	208	208	208	209	208	210	208	206	202
Broiler-feed price ratio 1/	3.0	3.0	3.1	3.3	3.1	3.2	3.4	3.3	3.4	3.6
Stocks beginning of period (mil. lb.)	38.3	26.1	38.1	35.1	32.7	29.0	32.6	36.3	40.7	37.1
Broiler-type chicks hatched (mil.) 2/	6,324.4	6,616.5	6,830.9	574.8	611.9	590.4	624.3	610.7	614.3	607.9
<b>Turkeys</b>										
Federally inspected slaughter, certified (mil. lb.)	4,580.7	4,651.9	4,828.9	411.9	383.3	391.9	378.7	446.7	419.3	424.6
Wholesale price, Eastern U.S., 8-18 lb. young hens (cts./lb.)	63.2	61.3	60.2	57.8	58.4	59.0	58.8	58.4	59.8	63.4
Price of turkey grower feed (\$/ton)	238	230	242	244	240	251	248	249	251	247
Turkey-feed price ratio 1/	3.2	3.3	3.1	3.1	3.1	3.0	3.1	3.0	3.1	3.2
Stocks beginning of period (mil. lb.)	235.9	306.4	264.1	662.1	359.6	359.2	424.4	474.0	556.1	625.3
Poults placed in U.S. (mil.)	304.9	308.1	307.8	25.5	27.5	28.6	27.9	28.4	28.6	26.2
<b>Eggs</b>										
Farm production (mil.)	67,987	69,352	70,592	5,914	6,054	5,850	5,998	5,805	5,981	5,999
Average number of layers (mil.)	270	275	278	274	281	281	280	280	281	281
Rate of lay (eggs per layer on farms)	251.7	252.4	253.9	23.9	21.5	20.8	21.4	20.7	21.3	21.3
Cartoned price, New York, grade A large (cts./doz.) 3/	82.2	77.5	85.4	64.6	85.2	77.8	67.6	74.7	68.9	72.8
Price of laying feed (\$/ton)	206	192	199	202	199	201	200	201	202	201
Egg-feed price ratio 1/	7.0	6.8	5.7	5.3	7.1	6.9	6.3	6.5	5.7	6.1
<b>Stocks, first of month</b>										
Shell (mil. doz.)	0.36	0.45	0.63	0.87	0.36	0.45	0.18	0.18	0.21	0.18
Frozen (mil. doz.)	10.3	11.2	12.3	14.8	12.9	11.4	10.9	11.8	11.5	13.4
<b>Replacement chicks hatched (mil.)</b>	398	420	386	27.6	37.3	37.2	37.1	35.1	34.2	32.8

<sup>1/</sup> Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. <sup>2/</sup> Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. <sup>3/</sup> Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 219-0767.

Table 14.—Dairy

	Annual			1993						
	1990	1991	1992	1992 Aug	Mar	Apr	May	June	July	Aug
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	12.21	11.05	11.88	12.54	11.02	12.15	12.52	12.03	11.42	11.17
Wholesale prices										
Butter, grade A Chl. (cts./lb.)	102.1	99.3	82.5	78.6	75.3	75.3	75.3	78.2	73.5	74.6
Am. cheese, Wis. assembly pt. (cts./lb.)	138.7	124.4	131.9	142.0	124.3	140.8	141.8	133.7	126.3	124.8
Nonfat dry milk (cts./lb.) 2/	100.6	94.0	107.1	111.8	113.3	113.9	116.3	112.9	109.6	109.3
USDA net removals 3/										
Total milk equiv. (mil. lb.) 4/	9,017.2	10,425.0	9,978.3	394.3	1,236.8	782.7	1,188.3	717.4	277.9	-89.3
Butter (mil. lb.)	400.3	442.8	439.9	17.2	53.8	33.3	52.1	31.1	11.3	-5.6
Am. cheese (mil. lb.)	21.5	78.9	15.7	0.7	2.2	0.1	1.2	0.9	0.8	0.7
Nonfat dry milk (mil. lb.)	117.8	269.5	142.8	18.4	44.3	28.5	21.1	18.5	25.8	31.1
Milk										
Milk prod. 21 States (mil. lb.)	125,772	125,671	128,300	10,873	11,087	10,958	11,443	11,024	10,946	10,572
Milk per cow (lb.)	14,778	14,977	15,546	1,295	1,358	1,344	1,404	1,354	1,346	1,302
Number of milk cows (1,000)	8,512	8,391	8,253	8,243	8,178	8,153	8,148	8,144	8,134	8,120
U.S. milk production (mil. lb.)	148,314	148,477	151,747	7/ 12,577	7/ 13,181	7/ 12,985	7/ 13,563	7/ 13,068	7/ 12,965	7/ 12,520
Stock, beginning										
Total (mil. lb.)	9,038	13,359	15,841	21,477	15,398	16,327	17,393	18,098	19,107	17,636
Commercial (mil. lb.)	4,120	5,148	4,461	5,290	4,585	4,697	4,583	4,927	5,348	5,375
Government (mil. lb.)	4,918	8,213	11,379	16,187	10,813	11,730	12,830	13,171	13,761	12,261
Imports, total (mil. lb.)	2,690	2,625	2,624	170	243	224	244	212	238	—
Commercial disappearance (mil. lb.)	138,922	139,343	142,143	12,319	11,972	12,323	12,094	11,985	12,733	—
Butter										
Production (mil. lb.)	1,302.2	1,336.8	1,365.2	88.7	139.1	124.2	115.1	103.9	87.2	79.3
Stocks, beginning (mil. lb.)	258.2	416.1	539.4	755.8	497.0	625.0	565.2	582.3	589.3	534.0
Commercial disappearance (mil. lb.)	915.2	903.5	943.7	72.0	87.7	90.4	58.8	80.9	72.5	—
American cheese										
Production (mil. lb.)	2,894.2	2,768.9	2,938.6	240.2	236.1	254.8	277.7	266.2	259.6	237.8
Stocks, beginning (mil. lb.)	236.2	347.4	318.7	369.2	332.6	334.8	330.1	353.0	413.6	408.9
Commercial disappearance (mil. lb.)	2,784.4	2,756.7	2,901.1	244.9	236.6	281.8	250.2	206.9	262.0	—
Other cheese										
Production (mil. lb.)	3,167.0	3,250.0	3,551.7	293.4	307.9	297.9	294.0	288.7	281.2	292.2
Stocks, beginning (mil. lb.)	93.2	110.8	97.5	127.1	124.4	133.3	131.6	131.7	131.4	126.0
Commercial disappearance (mil. lb.)	3,426.4	3,539.2	3,795.4	316.2	323.7	323.6	320.2	311.3	312.0	—
Nonfat dry milk										
Production (mil. lb.)	879.2	877.5	872.1	59.9	69.1	90.7	103.8	95.2	88.4	64.9
Stocks, beginning (mil. lb.)	49.5	161.9	214.8	148.7	71.5	78.5	87.3	113.0	143.6	130.4
Commercial disappearance (mil. lb.)	697.6	662.7	714.8	42.5	18.2	53.3	56.1	46.2	75.7	—
Frozen dessert										
Production (mil. gal.) 5/	1,174.6	1,203.1	1,196.8	110.9	101.6	105.3	110.5	124.4	124.8	117.8
	Annual			1992				1993		
	1990	1991	1992	I	II	III	IV	I	II P	III P
Milk production (mil. lb.)	148,314	148,477	151,747	37,989	39,077	37,515	37,168	37,763	39,614	37,498
Milk per cow (lb.)	14,842	14,860	15,423	3,852	3,971	3,818	3,782	3,882	4,068	3,862
No. of milk cows (1,000)	10,127	9,992	9,839	9,863	9,841	9,826	9,827	9,777	9,739	9,710
Milk-feed price ratio 6/	1.71	1.58	1.69	1.68	1.65	1.75	1.69	1.61	1.68	1.62
Returns over concentrate costs (\$/cwt milk) 6/	10.17	8.95	9.74	9.60	9.50	10.10	9.75	9.01	9.57	9.28

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Includes products exported through the Dairy Export Incentive Program (DEIP).

4/ Milk equivalent, fat basis. 5/ Hard ice cream, ice milk, & hard sherbet. 6/ Based on average milk price after adjustment for price support deductions.

7/ Estimated. — = not available. P = preliminary.

Information contact: LaVerne T. Williams (202) 219-0770.

Table 15.—Wool

	Annual			1992				1993		
	1990	1991	1992	I	II	III	IV	I	II P	III P
U.S. wool price, (cts./lb.) 1/	256	199	204	209	222	210	176	146	136	—
Imported wool price, (cts./lb.) 2/	287	187	210	250	233	203	189	150	137	—
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	120,622	137,187	139,715	36,929	36,045	34,482	32,279	35,503	35,720	—
Carpet wool (1,000 lb.)	12,124	14,352	14,726	4,580	3,823	3,145	3,378	4,511	4,341	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. — = not available. P = preliminary.

Information contact: John Lawler (202) 219-0840.

Table 16.—Meat Animals

	Annual			1992	1993					
	1990	1991	1992	Aug	Mar	Apr	May	June	July	Aug
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	8,378	8,992	8,397	7,000	8,761	8,701	8,339	8,343	7,923	7,653
Placed on feed (1,000 head)	21,030	19,704	20,498	1,641	1,616	1,316	1,781	1,410	1,483	1,845
Marketings (1,000 head)	19,198	19,066	18,623	1,592	1,565	1,552	1,646	1,723	1,672	1,687
Other disappearance (1,000 head)	1,218	1,233	1,199	81	111	126	131	107	61	77
Beef steer-corn price ratio, Omaha 2/	32.8	31.6	33.3	34.7	38.7	37.6	37.5	38.8	31.4	32.8
Hog-corn price ratio, Omaha 2/	23.1	21.1	19.0	21.3	22.1	20.9	21.7	23.2	20.1	21.7
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha 1,000-1,100 lb.,	77.40	73.83	74.65	71.08	82.45	81.47	80.97	76.13	72.22	73.28
Choice steers, Neb. Direct,										
1,100-1,300 lb.	78.56	74.28	75.36	73.96	82.60	82.25	80.39	76.70	73.60	74.59
Boning utility cows, Sioux Falls	63.60	60.31	44.84	46.13	49.50	49.15	49.00	49.44	50.28	49.61
Feeder cattle										
Medium no. 1, Oklahoma City										
800-700 lb.	92.15	92.74	85.57	88.18	90.49	92.82	93.78	96.33	92.96	92.58
Slaughter hogs										
Barrows & gilts, Iowa, S. Minn.	55.32	49.69	43.05	45.27	47.51	46.09	47.69	48.98	46.71	48.63
Feeder pigs										
S. Mo. 40-50 lb. (per head)	51.46	39.84	31.71	31.28	51.38	49.35	43.88	38.65	36.69	36.13
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	55.54	53.21	61.00	52.38	75.50	71.25	62.50	57.75	57.00	58.97
Ewes, Good, San Angelo	35.21	31.98	35.39	35.30	46.80	31.95	36.29	38.00	38.17	35.39
Feeder lambs										
Choice, San Angelo	62.95	53.54	62.09	53.69	84.10	71.45	62.60	59.80	58.58	63.17
Wholesale meat prices, Midwest										
Boxed beef cut-out value	123.21	118.31	116.73	114.38	124.80	126.12	127.19	120.52	114.48	116.73
Canner & cutter cow beef	99.96	99.42	93.85	96.74	96.13	95.55	96.36	96.66	101.69	98.50
Pork loins, 14-18 lb. 3/	117.52	108.39	101.41	111.18	100.61	107.61	111.16	122.28	113.40	116.73
Pork bellies, 12-14 lb.	53.80	47.79	30.39	35.13	41.28	41.19	39.86	36.24	44.51	46.68
Hams, skinned, 17-20 lb.	84.87	75.68	67.42	68.34	73.78	63.81	63.09	63.59	64.94	66.96
All fresh beef retail price 4/	262.48	271.05	266.67	264.23	273.21	275.96	276.90	274.03	274.99	273.00
Commercial slaughter (1,000 head) 5/										
Cattle	33,241	32,690	32,873	2,782	2,775	2,681	2,775	3,013	2,884	2,941
Steers	16,587	16,728	17,135	1,494	1,434	1,409	1,504	1,611	1,494	1,584
Heifers	10,090	9,725	9,236	802	747	721	768	868	844	820
Cows	5,920	5,623	5,646	426	541	499	452	473	468	485
Bulls & stags	644	614	653	59	52	52	63	61	58	62
Calves	1,789	1,436	1,371	110	119	88	85	94	93	98
Sheep & lambs	5,654	5,722	5,493	419	489	482	411	478	409	432
Hogs	85,138	88,169	94,866	7,683	8,146	8,002	7,145	7,507	7,177	7,637
Commercial production (mil. lb.)										
Beef	22,634	22,800	22,968	1,980	1,858	1,782	1,857	2,051	1,983	2,067
Veal	316	296	299	24	26	22	20	22	22	23
Lamb & mutton	358	358	343	25	32	30	27	31	26	27
Pork	15,300	15,948	17,185	1,378	1,481	1,465	1,309	1,377	1,311	1,366

	Annual			1992			1993			
	1990	1991	1992	II	III	IV	I	II	III	IV
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	9,943	10,827	10,135	9,693	8,847	8,920	10,884	10,452	9,493	—
Placed on feed (1,000 head)	24,803	23,208	24,246	5,273	6,107	7,463	5,321	5,284	—	—
Marketings (1,000 head)	22,526	22,363	22,061	5,675	5,766	5,179	5,314	5,783	* 5,950	—
Other disappearance (1,000 head)	1,393	1,517	1,436	444	268	320	439	460	—	—
Hogs & pigs (10 States) 6/										
Inventory (1,000 head) 1/	42,200	42,900	45,735	44,800	47,255	49,175	47,140	45,580	46,420	46,920
Breeding (1,000 head) 1/	5,275	5,257	5,610	5,655	5,845	5,840	5,735	5,520	5,630	5,560
Market (1,000 head) 1/	36,925	37,643	40,125	39,245	41,410	43,335	41,405	40,060	40,790	41,360
Farrowings (1,000 head)	8,960	9,516	10,202	2,663	2,501	2,398	2,210	2,471	2,302	* 2,331
Pig crop (1,000 head)	70,589	75,330	82,497	21,570	20,395	19,351	18,093	20,065	18,610	—

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 4/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 5/ Classes estimated. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). May not add to NASS totals due to rounding. — = not available. \* Intentions.

Information contact: Polly Cochran (202) 219-0767.

## Crops &amp; Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area		Harvested	Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside	Planted										
	3/					4/						5/
	Mil. acres			Bu./acre								\$/bu.
<b>Wheat</b>												
1988/89	22.5	65.5	53.2	34.1	1,812	3,096	150	829	1,415	2,394	702	3.72
1989/90	9.8	76.6	62.2	32.7	2,037	2,762	144	849	1,232	2,225	536	3.72
1990/91	7.5	77.2	69.3	39.5	2,736	3,309	499	875	1,068	2,443	866	2.61
1991/92*	15.9	69.9	57.7	34.3	1,981	2,888	254	883	1,280	2,416	472	3.00
1992/93*	7.3	72.3	62.4	39.4	2,459	3,001	196	922	1,354	2,472	529	3.24
1993/94*	5.0	72.1	63.0	38.4	2,422	3,026	369	835	1,125	2,329	697	2.75-3.05
	Mil. acres			Lb./acre				Mil. cwt (rough equiv.)				\$/cwt
<b>Rice</b>												
1988/89	1.09	2.93	2.90	5,514	159.9	195.1	---	8/ 82.5	85.9	168.4	28.7	6.63
1989/90	1.18	2.73	2.69	5,749	154.5	185.6	---	8/ 82.1	77.2	159.3	26.4	7.35
1990/91	1.02	2.90	2.82	5,529	156.1	187.2	---	8/ 91.7	70.9	162.7	24.6	6.70
1991/92*	0.9	2.88	2.78	5,674	157.5	187.3	---	8/ 93.7	66.4	159.9	27.4	7.58
1992/93*	0.4	3.17	3.13	5,722	179.1	212.6	---	8/ 96.1	77.0	173.2	39.4	5.90
1993/94*	0.6	3.02	2.94	5,621	165.3	211.4	---	8/ 99.5	87.0	186.5	24.8	7.50-9.00
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
<b>Corn</b>												
1988/89	20.5	67.7	58.3	84.8	4,929	9,191	3,941	1,293	2,026	7,260	1,930	2.64
1989/90	10.8	72.2	64.7	116.3	7,525	9,458	4,389	1,356	2,388	6,113	1,344	2.36
1990/91	10.7	74.2	67.0	118.5	7,934	9,282	4,663	1,373	1,725	7,761	1,521	2.28
1991/92*	7.4	76.0	68.8	108.6	7,475	9,016	4,878	1,454	1,584	7,916	1,100	2.37
1992/93*	5.3	79.3	72.1	131.4	9,479	10,585	5,268	1,510	1,675	8,473	2,113	2.07
1993/94*	9.0	73.7	63.1	110.3	8,962	9,085	5,050	1,550	1,400	8,000	1,085	2.20-2.60
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
<b>Sorghum</b>												
1988/89	3.9	10.3	9.0	63.8	577	1,239	466	22	311	800	440	2.27
1989/90	3.3	12.6	11.1	55.4	615	1,055	517	15	303	835	220	2.10
1990/91	3.3	10.5	9.1	63.1	573	793	410	9	232	651	143	2.12
1991/92*	2.5	11.1	9.9	59.3	585	727	374	8	292	674	53	2.25
1992/93*	2.0	13.3	12.2	72.8	864	937	480	8	275	762	175	1.89
1993/94*	2.0	10.7	9.7	65.6	639	814	440	8	275	723	92	2.00-2.40
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
<b>Barley</b>												
1988/89	2.8	9.8	7.6	38.0	290	622	171	175	79	425	196	2.80
1989/90	2.3	9.1	8.3	48.8	404	614	193	175	84	453	161	2.42
1990/91	2.9	8.2	7.5	56.1	422	598	205	178	81	461	135	2.14
1991/92*	2.2	8.9	8.4	55.2	464	624	230	171	64	496	129	2.10
1992/93*	2.3	7.6	7.3	62.5	458	598	200	187	80	447	151	2.05
1993/94*	2.2	7.9	7.1	58.9	416	592	210	165	85	460	132	2.05-2.25
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
<b>Oats</b>												
1988/89	0.3	13.9	5.5	39.3	218	392	194	100	1	294	96	2.61
1989/90	0.4	12.1	6.9	54.3	374	538	256	115	1	381	157	1.49
1990/91	0.2	10.4	5.9	60.1	358	578	286	120	1	407	171	1.14
1991/92*	0.6	8.7	4.8	50.7	243	489	235	125	2	362	128	1.20
1992/93*	0.7	8.0	4.5	65.6	295	477	233	125	6	364	113	1.32
1993/94*	0.8	7.9	3.8	54.6	208	401	180	125	5	305	91	1.35-1.55
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
<b>Soybeans</b>												
1988/89	0	58.8	57.4	27.0	1,549	1,855	7/ 88	1,056	527	1,673	182	7.42
1989/90	0	60.8	59.5	32.3	1,824	2,109	7/ 101	1,148	623	1,870	239	5.69
1990/91	0	67.8	56.5	34.1	1,928	2,168	7/ 95	1,187	557	1,839	329	5.74
1991/92*	0	59.2	58.0	34.2	1,987	2,319	7/ 103	1,254	684	2,041	278	5.58
1992/93*	0	59.3	56.2	37.6	2,188	2,468	7 122	1,279	775	2,176	292	5.60
1993/94*	0	59.5	56.0	33.7	1,891	2,168	108	1,235	640	1,983	205	5.85-6.65
								Mil. lbs.				¢/cwt/lb.
<b>Soybean oil</b>												
1988/89	---	---	---	---	11,737	13,967	---	10,591	1,661	12,252	1,715	21.10
1989/90	---	---	---	---	13,004	14,741	---	12,083	1,353	13,436	1,305	22.30
1990/91	---	---	---	---	13,408	14,730	---	12,184	760	12,644	1,786	21.00
1991/92*	---	---	---	---	14,345	16,132	---	12,245	1,648	13,893	2,239	19.10
1992/93*	---	---	---	---	13,760	16,000	---	12,800	1,600	14,300	1,700	21.40
1993/94*	---	---	---	---	13,955	15,675	---	12,850	1,425	14,275	1,400	22.0-25.5
								f,000 tons				¢/ton
<b>Soybean meal</b>												
1988/89	---	---	---	---	24,943	25,100	---	19,657	5,270	24,927	173	252.4
1989/90	---	---	---	---	27,719	27,900	---	22,263	5,319	27,582	318	186.5
1990/91	---	---	---	---	28,325	28,688	---	22,934	5,469	28,403	285	181.4
1991/92*	---	---	---	---	29,831	30,193	---	23,008	6,945	29,953	230	189.2
1992/93*	---	---	---	---	30,310	30,850	---	24,000	6,325	30,325	325	194.0
1993/94*	---	---	---	---	29,335	29,775	---	24,100	5,375	29,475	300	180-210

See footnotes at end of table

Table 17.—Supply &amp; Utilization, continued

	Area		Yield	Production	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm price 6/	
	Set Aside 3/	Planted										Harvested
	Mil. acres		Lb./acre		Mil. bales		Cts./lb.					
Cotton 10/												
1988/89	2.2	12.5	11.9	619	15.4	21.2	---	7.8	6.1	13.9	7.1	66.80
1989/90	3.5	10.6	9.5	614	12.2	19.3	---	8.6	7.7	16.5	3.0	66.20
1990/91	2.0	12.3	11.7	634	15.5	18.5	---	8.7	7.8	18.5	2.3	67.10
1991/92*	1.2	14.1	13.0	652	17.6	20.0	---	9.6	6.7	18.3	3.7	58.10
1992/93*	1.7	13.2	11.1	699	16.2	19.9	---	10.3	5.2	15.5	4.7 11/	54.80
1993/94*	1.4	13.7	13.3	614	17.0	22.0	---	10.3	6.0	16.3	5.4 12/	

\*October 12, 1993 Supply & Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats; August 1 for cotton & rice; September 1 for soybeans, corn, & sorghum; October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres; 1 metric ton = 2,204,622 pounds; 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.048 cwt of rice, & 4.59480-pound bales of cotton. 3/ Includes diversion, acreage reduction, 50-92, & 0-92 programs. 4/ 92 & 50/92 set-aside includes idled acreage & acreage planted to minor oilseeds, sesame, and crambe. 5/ Includes imports. 6/ Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding & Government purchases. 7/ Residual included in domestic use. 8/ Includes seed. 9/ Simple average of crude soybean oil, Decatur. 10/ Simple average of 45 percent, Decatur. 11/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. 12/ Weighted average for August 1-April 1; not a projection for the marketing year. 13/ USDA is prohibited from publishing cotton price projections. — = not available or not applicable.

Note: Set-aside data for 1993 are from June 15 sign-up report.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 18.—Cash Prices, Selected U.S. Commodities

	Marketing year 1/				1992		1993			
	1988/89	1989/90	1990/91	1991/92	Aug	Apr	May	June	July	Aug
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	4.17	4.22	2.94	3.77	3.27	3.59	3.51	3.33	3.38	3.34
Wheat, DNS, Minneapolis (\$/bu.) 3/	4.36	4.16	3.06	3.82	3.65	3.80	3.71	3.96	4.80	4.88
Rice, S.W. La. (\$/cwt) 4/	14.85	15.55	16.25	18.48	15.50	12.15	11.90	11.75	12.38	12.38
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.68	2.54	2.41	2.52	2.23	2.32	2.29	2.20	2.38	2.37
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.17	4.21	4.08	4.36	3.77	3.72	3.82	3.58	3.99	4.01
Barley, feed, Duluth (\$/bu.) 5/	2.32	2.20	2.13	2.17	2.03	2.12	2.05	1.99	1.96	1.86
Barley, malting, Minneapolis (\$/bu.)	4.11	3.28	2.42	2.38	2.19	2.34	2.34	2.30	2.27	2.27
U.S. price, SLM, 1-1/16 in. (cts./lb.) 6/	57.7	60.8	74.6	58.7	57.6	58.2	56.4	54.4	54.4	53.0
Northern Europe prices index (cts./lb.) 7/	66.4	82.3	82.9	62.9	59.2	60.9	60.0	58.5	58.0	55.8
U.S. M 1-3/32 in. (cts./lb.) 8/	69.2	83.8	88.2	66.3	62.9	66.3	65.1	63.0	62.9	57.3
Soybeans, no. 1 yellow, 30 day, Chicago (\$/bu.)	7.41	5.86	5.76	5.75	5.46	5.88	5.99	5.99	6.99	6.68
Soybean oil, crude, Decatur (cts./lb.)	21.10	22.30	21.00	19.10	17.76	21.24	20.15	21.30	23.96	23.33
Soybean meal, 48% protein, Decatur (\$/ton) 9/	252.40	186.50	181.40	189.20	186.00	187.40	187.40	223.00	229.00	219.10

1/ Beginning June 1 for wheat & barley; Aug. 1 for rice & cotton; Sept. 1 for corn, sorghum & soybeans; Oct. 1 for soybean meal & oil. 2/ Ordinary protein. 3/ 14% protein. 4/ Long grain, milled basis. 5/ Beginning Mar. 1987 reporting point changed from Minneapolis to Duluth. 6/ Average spot market. 7/ Liverpool Cotton "A" Index; average of five lowest prices of 13 selected growths. 8/ Memphis territory growths. 9/ Note change to 48% protein.

Information contacts: Wheat, rice, & feed grains, Jenny Gonzales (202) 219-0840; Cotton, Les Meyer (202) 219-0840; Soybeans, Mark Ash (202) 219-0840.

Table 19.—Farm Programs, Price Supports, Participation &amp; Payment Rates

	Target Price	Basic loan rate	Findley or announced loan rate 1/	Payment rates			Effective base acres 2/	Program 3/	Participation rate 4/
				Total deficiency	Mandatory	Optional			
				\$/bu.			Mil. acres	Percent of base	Percent of base
<b>Wheat</b>									
1987/88	4.38	2.85	2.28	1.81	—	—	87.8	27.5/0/0	88
1988/89	4.23	2.76	2.21	0.69	—	—	84.8	27.5/0/0	86
1989/90	4.10	2.58	2.08	0.32	—	—	82.3	10/0/0	78
1990/91 5/	4.00	2.44	1.95	1.28	—	—	80.5	5/0/0	83
1991/92	4.00	2.52	2.04	*1.35	—	—	79.2	15/0/0	85
1992/93	4.00	2.58	2.21	**0.81	—	—	78.9	5/0/0	83
1993/94	4.00	2.86	2.45	***1.05	—	—	78.5	0/0/0	87
1994/95	—	—	—	—	—	—	—	0/0/0	—
<b>Rice</b>									
1987/88	11.66	6.84	7/ 6.15	4.82	—	—	4.2	35/0/0	98
1988/89	11.15	6.63	7/ 6.50	4.31	—	—	4.2	25/0/0	94
1989/90	10.60	6.50	7/ 6.00	3.56	—	—	4.2	25/0/0	94
1990/91 5/	10.71	6.50	7/ 5.40	4.16	—	—	4.2	20/0/0	95
1991/92	10.71	6.50	7/ 5.85	3.07	—	—	4.2	5/0/0	95
1992/93	10.71	6.50	—	**4.21	—	—	4.1	0/0/0	96
1993/94	10.71	6.50	—	***4.21	—	—	4.1	5/0/0	98
<b>Corn</b>									
1987/88	3.03	2.28	1.82	1.09	—	2.00	81.5	20/0/15	80
1988/89	2.93	2.21	1.77	0.36	—	1.75	82.9	20/0/10	87
1989/90	2.84	2.08	1.65	0.68	—	—	82.7	10/0/0	79
1990/91 5/	2.75	1.98	1.57	0.51	—	—	82.6	10/0/0	78
1991/92	2.75	1.89	1.62	0.41	—	—	82.7	7.5/0/0	77
1992/93	2.75	2.01	1.72	**0.73	—	—	82.1	5/0/0	76
1993/94	2.75	1.99	1.72	***0.72	—	—	81.9	10/0/0	81
<b>Sorghum</b>									
1987/88	2.88	2.17	1.74	1.14	—	1.90	17.4	8/ 20/0/15	84
1988/89	2.78	2.10	1.68	0.48	—	1.65	18.8	20/0/10	82
1989/90	2.70	1.98	1.57	0.68	—	—	18.2	10/0/0	71
1990/91 5/	2.61	1.88	1.49	0.56	—	—	15.4	10/0/0	70
1991/92	2.61	1.80	1.54	0.37	—	—	13.5	7.5/0/0	77
1992/93	2.61	1.91	1.63	**0.70	—	—	13.6	5/0/0	79
1993/94	2.61	1.89	1.63	***0.70	—	—	13.6	5/0/0	81
<b>Barley</b>									
1987/88	2.60	1.88	1.49	0.79	—	1.60	12.5	8/ 20/0/15	85
1988/89	2.51	1.80	1.44	0.00	—	1.40	12.6	20/0/10	79
1989/90	2.44	1.68	1.34	0.00	—	—	12.3	10/0/0	67
1990/91 5/	2.38	1.60	1.28	0.20	—	—	11.9	10/0/0	68
1991/92	2.36	1.54	1.32	0.62	—	—	11.6	7.5/0/0	76
1992/93	2.36	1.64	1.40	**0.58	—	—	11.1	5/0/0	75
1993/94	2.38	1.62	1.40	***0.62	—	—	10.8	0/0/0	82
<b>Oats</b>									
1987/88	1.60	1.17	0.94	0.20	—	0.80	8.4	8/ 20/0/15	45
1988/89	1.55	1.14	0.91	0.00	—	—	7.9	5/0/0	30
1989/90	1.50	1.06	0.85	0.00	—	—	7.8	5/0/0	18
1990/91 5/	1.45	1.01	0.81	0.32	—	—	7.5	5/0/0	09
1991/92	1.45	0.97	0.83	0.35	—	—	7.3	0/0/0	38
1992/93	1.45	1.03	0.88	**0.17	—	—	7.2	0/0/0	40
1993/94	1.45	1.02	0.88	***0.15	—	—	7.1	0/0/0	46
<b>Soybeans 9/</b>									
1987/88	—	—	4.77	—	—	—	—	—	—
1988/89	—	—	4.77	—	—	—	—	—	—
1989/90	—	—	4.53	—	—	—	—	10/ 10/25	—
1990/91 6/	—	—	4.50	—	—	—	—	10/ 0/25	—
1991/92	—	—	5.02	—	—	—	—	10/ 0/25	—
1992/93	—	—	5.02	—	—	—	—	10/ 0/25	—
1993/94	—	—	5.02	—	—	—	—	10/ 0/25	—
<b>Upland cotton</b>									
1987/88	79.4	52.25	11/ 52.25	17.3	—	—	14.5	25/0/0	93
1988/89	75.9	51.80	11/ 51.80	19.4	—	—	14.6	12.5/0/0	89
1989/90	73.4	50.00	11/ 50.00	13.1	—	—	14.6	25/0/0	89
1990/91 5/	72.9	50.27	11/ 50.27	7.3	—	—	14.4	12.5/0/0	88
1991/92 12/	72.9	60.77	11/ 47.23	10.1	—	—	14.6	5/0/0	84
1992/93	72.9	52.35	11/ —	**20.3	—	—	14.9	10/0/0	89
1993/94	72.9	52.35	11/ —	***20.55	—	—	15.1	7.5/0/0	90

1/ There are no Findley loan rates for rice or cotton. See footnotes 7/ & 11/. 2/ National effective crop acreage base as determined by ASCS. Net of CRP.  
 3/ Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acreage reduced must be devoted to a conserving use to receive program benefits. 4/ Percentage of effective base acres enrolled in acreage reduction programs. 5/ Payments & loans were reduced by 1.4 percent in 1990/91 due to Gramm-Rudman-Hollings. Budget Reconciliation Act reductions to deficiency payments rates were also in effect in that year. Data do not include these reductions. 6/ Under 1990 modified contracts, participating producers plant up to 105 percent of their wheat base acres. For every acre planted above 95 percent of base, the acreage used to compute deficiency payments was cut by 1 acre. 7/ A marketing loan has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly). However, loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to market-year average loan repayment rates. 8/ The sorghum, oats, & barley programs are the same as for corn except as indicated. 9/ There are no target prices, base acres, acreage reduction programs, or deficiency payment rates for soybeans. 10/ Nominal percentage of program crop base acres permitted to shift into soybeans without loss of base. 11/ A marketing loan has been in effect for cotton since 1988/87. In 1987/88 & after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average loan repayment rates. 12/ A marketing certificate program was implemented on Aug. 1, 1991. — = not available.

\* For wheat, the 1991/92 rate is the total deficiency payment rate for the "regular" program. For the winter wheat option, the rate is \$1.25.

\*\* For wheat, corn, sorghum, barley, and oats, regular deficiency payment rate based on the 5-month price. For rice and upland cotton, total deficiency payment rate.

\*\*\* Estimated total deficiency payment rate. Minimum guaranteed payment rate for 0/92 (wheat & feed grains) & 50/92 (rice and upland cotton) programs. Sign-up for 1993 programs was March 1-April 30, 1993.

Note: 1993 effective base acres and participation rates are from June 15 signup report.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 20.—Fruit

	1984	1985	1986	1987	1988	1989	1990	1991	1992 P
Citrus 1/									
Production (1,000 ton)	10,832	10,525	11,058	11,993	12,761	13,186	10,860	11,285	12,449
Per capita consumpt. (lbs.) 2/	22.5	21.5	24.2	23.9	25.4	23.5	21.4	19.1	24.3
Noncitrus 3/									
Production (1,000 tons)	14,301	14,191	13,874	16,011	15,893	16,365	16,857	15,750	17,142
Per capita consumpt. (lbs.) 2/	66.2	65.1	68.7	73.4	71.7	73.0	70.8	70.8	74.4
	1992	1993							
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
F.o.b. shipping point prices									
Apples (\$/carton) 4/	13.80	14.50	12.33	10.86	11.33	11.50	11.50	11.50	12.78
Pears (\$/box) 5/	13.86	18.00	18.00	18.00	18.08	16.28	18.28	—	12.00
Grower prices									
Oranges (\$/box) 6/	2.85	2.58	2.51	2.70	3.32	3.58	3.90	4.73	5.44
Grapefruit (\$/box) 6/	4.19	3.11	2.58	1.59	1.94	1.44	1.45	3.53	2.44
Stocks, ending									
Fresh apples (mil. lbs.)	4,077.3	3,433.1	2,769.3	2,011.1	1,341.5	895.1	488.9	201.2	28.4
Fresh pears (mil. lbs.)	223.4	174.2	128.1	81.7	50.8	23.3	1.8	7.1	82.9
Frozen fruits (mil. lbs.)	888.4	823.3	842.1	744.8	690.3	661.6	710.3	831.3	945.2
Frozen orange juice (mil. lbs.)	892.9	1,135.9	1,289.4	1,283.7	1,440.9	1,462.3	1,351.8	1,147.0	1,023.8

1/ 1992 Indicated 1991/92 season. 2/ Fresh per capita consumption. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynnie Napper (202) 219-0884

Table 21.—Vegetables

	Calendar year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 P
Production										
Total vegetables (1,000 cwt)	403,509	456,334	453,030	448,829	478,381	488,779	542,437	561,704	564,582	534,951
Fresh (1,000 cwt) 1/ 3/	185,782	201,917	203,549	203,165	220,539	228,397	239,261	239,104	229,506	236,140
Processed (tons) 2/ 3/	10,886,350	12,725,880	12,474,040	12,273,200	12,892,100	12,019,110	15,167,790	16,130,020	16,753,820	14,940,550
Mushrooms (1,000 lbs) 4/	681,531	595,681	587,958	614,393	831,819	867,759	714,992	749,151	748,832	778,357
Potatoes (1,000 cwt)	333,726	362,039	406,809	361,743	389,320	356,438	370,444	402,110	417,622	411,636
Sweetpotatoes (1,000 cwt)	12,083	12,902	14,573	12,368	11,611	10,945	11,358	12,594	11,203	11,780
Dry edible beans (1,000 cwt)	15,520	21,070	22,298	22,960	26,031	19,253	23,729	32,379	33,785	22,047
	1992				1993					
	May	Jun	July	Aug	Mar	Apr	May	Jun	July	Aug
Shipments (1,000 cwt)										
Fresh	28,050	29,056	22,410	17,840	24,099	18,956	25,574	36,353	19,418	16,292
Iceberg lettuce	5,274	4,811	4,850	4,613	5,054	3,570	5,031	5,316	3,715	3,971
Tomatoes, all	3,564	3,499	2,957	2,674	3,885	2,865	2,540	4,229	2,742	2,183
Dry-bulb onions	2,752	2,786	2,848	2,560	3,390	2,448	2,969	3,720	2,877	2,793
Other 5/	16,470	17,960	11,955	7,893	11,770	10,073	15,014	23,088	10,882	7,345
Potatoes, all	17,628	12,885	9,651	9,827	18,545	18,489	17,946	14,284	9,393	8,622
Sweetpotatoes	212	190	164	138	468	334	216	244	178	164

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeysuckle, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Fresh & processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1 - June 30. 5/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, bell peppers, squash, cantaloupes, honeysuckle, & watermelons. P = preliminary.

Information contacts: Gary Lucier or John Love (202) 219-0884.

Table 22.—Other Commodities

	Annual					1992			1993	
	1988	1989	1990	1991	1992	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June
Sugar										
Production 1/	7,087	6,841	6,334	7,133	7,501	716	722	3,929	2,351	825
Deliveries 1/	8,188	8,340	8,661	8,704	8,920	2,208	2,409	2,312	2,067	2,201
Stocks, ending 1/	3,132	2,947	2,729	3,039	3,220	2,757	1,451	3,225	3,904	3,014
Coffee										
Composite green price N.Y. (cts./lb.)	119.59	95.17	76.93	70.09	55.30	61.72	48.36	61.94	60.48	55.07
Imports, green bean equiv. (mil. lbs.) 2/	2,072	2,885	2,715	2,553	2,989	720	704	705	757	598
	Annual				1992	1993				
	1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	167.3	172.3	—	—	—	—	—	—	—	—
Burley (\$/lb.)	175.3	178.8	—	—	180.0	178.0	173.0	—	—	—
Domestic consumption 4/										
Cigarettes (bil.)	523.1	516.3	509.5	51.7	31.9	39.2	51.4	37.8	39.4	41.0
Large cigars (mil.)	2,343.5	2,231.9	2,217.1	217.2	125.1	141.1	178.8	159.0	175.2	227.7

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contacts: Sugar, Peter Buzzanelli (202) 219-0886, Coffee, Fred Gray (202) 219-0888, Tobacco, Verner Grise (202) 219-0890.

## World Agriculture

Table 23.—World Supply & Utilization of Major Crops, Livestock & Products

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92 P	1992/93 F
Million units							
<b>Wheat</b>							
Area (hectares)	227.9	219.7	217.4	225.8	231.4	222.3	222.4
Production (metric tons)	524.1	496.0	495.0	533.0	588.1	542.3	560.0
Exports (metric tons) 1/	90.7	112.1	102.9	102.0	101.6	108.9	109.4
Consumption (metric tons) 2/	515.7	525.0	524.9	532.2	563.7	559.2	550.5
Ending stocks (metric tons) 3/	178.1	150.1	120.2	121.0	145.4	128.5	138.0
<b>Coarse grains</b>							
Area (hectares)	336.0	323.2	323.2	320.9	314.2	318.0	317.8
Production (metric tons)	822.3	784.2	71.0	791.0	820.9	803.0	857.6
Exports (metric tons) 1/	82.9	88.3	95.2	103.8	88.1	93.4	87.9
Consumption (metric tons) 2/	798.4	807.1	784.9	814.1	808.7	809.9	833.4
Ending stocks (metric tons) 3/	235.2	215.0	151.0	127.9	140.2	133.4	167.6
<b>Rice, milled</b>							
Area (hectares)	145.1	141.7	145.5	146.8	146.8	145.7	144.9
Production (metric tons)	316.7	314.5	330.1	343.1	350.7	348.4	351.0
Exports (metric tons) 4/	12.9	11.2	13.9	11.7	12.0	14.0	13.9
Consumption (metric tons) 2/	320.8	319.9	327.7	336.4	345.7	352.9	354.1
Ending stocks (metric tons) 3/	50.9	45.5	47.8	54.5	59.5	64.9	51.8
<b>Total grains</b>							
Area (hectares)	709.0	684.6	686.1	693.3	692.4	688.0	685.1
Production (metric tons)	1,663.1	1,594.7	1,548.1	1,667.1	1,759.7	1,693.7	1,768.6
Exports (metric tons) 1/	186.5	211.6	212.0	217.5	201.7	218.3	211.2
Consumption (metric tons) 2/	1,632.9	1,652.0	1,637.5	1,682.7	1,718.1	1,722.0	1,738.0
Ending stocks (metric tons) 3/	465.2	410.6	319.0	303.4	345.1	316.6	347.4
<b>Oilseeds</b>							
Crush (metric tons)	181.8	188.4	164.5	171.8	177.2	185.0	184.4
Production (metric tons)	194.9	210.5	201.6	212.5	215.9	223.5	226.6
Exports (metric tons)	37.7	39.5	31.5	35.6	33.0	37.5	37.9
Ending stocks (metric tons)	23.3	24.0	22.1	23.7	23.4	21.7	23.7
<b>Meals</b>							
Production (metric tons)	110.7	115.4	111.1	117.0	119.7	125.0	125.2
Exports (metric tons)	36.7	35.8	37.4	39.9	40.7	43.2	41.7
<b>Oils</b>							
Production (metric tons)	50.4	53.3	53.3	57.1	58.2	60.4	60.7
Exports (metric tons)	16.9	17.5	18.1	20.4	20.6	20.6	20.4
<b>Cotton</b>							
Area (hectares)	29.2	30.8	33.7	31.5	33.1	34.7	32.7
Production (bales)	70.6	81.1	84.4	79.9	87.0	96.0	82.6
Exports (bales)	33.4	29.9	33.1	31.3	29.6	28.3	24.9
Consumption (bales)	82.6	84.1	85.3	86.7	85.5	84.5	86.7
Ending stocks (bales)	35.7	32.8	31.9	26.3	28.6	40.8	38.1
	1987	1988	1989	1990	1991	1992	1993 F
<b>Red meat</b>							
Production (metric tons)	112.9	116.6	118.1	120.3	121.3	121.3	122.9
Consumption (metric tons)	111.0	114.6	116.7	118.1	119.3	119.6	121.3
Exports (metric tons) 1/	6.7	7.4	7.6	7.6	8.0	7.8	8.1
<b>Poultry 5/</b>							
Production (metric tons)	31.3	32.7	34.0	35.8	37.6	39.2	41.0
Consumption (metric tons)	30.6	32.0	33.2	34.9	37.1	38.8	40.5
Exports (metric tons) 1/	1.5	1.6	1.8	2.1	2.1	2.4	2.6
<b>Dairy</b>							
Milk production (metric tons)	425.7	428.9	434.7	442.0	429.4	415.0	408.2

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1987 data correspond with 1986/87, etc. 5/ Poultry excludes the Peoples Republic of China before 1986. P = preliminary. F = forecast

Information contacts: Crops, Carol Whitton (202) 219-0824; red meat & poultry, Linda Bailey (202) 219-1285; dairy, Sara Short (202) 219-0770.

## U.S. Agricultural Trade

Table 24.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1992	1993					
	1990	1991	1992	Aug	Mar	Apr	May	June	July	Aug
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.72	3.52	4.13	3.50	4.05	3.87	3.70	3.31	3.50	3.56
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.79	2.75	2.66	2.49	4.49	2.57	2.61	2.37	2.64	2.61
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.65	2.69	2.63	2.41	2.48	2.44	2.42	2.30	2.60	2.58
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	6.24	6.05	6.01	5.88	6.09	6.18	6.26	6.27	7.32	7.01
Soybean oil, Decatur (cts./lb.)	22.75	20.14	19.16	17.76	21.01	21.29	21.26	21.21	23.96	23.34
Soybean meal, Decatur (\$/ton)	169.37	172.90	177.79	174.31	183.37	187.42	193.74	193.41	229.44	219.06
Cotton, 7-market avg. spot (cts./lb.)	71.25	69.69	53.90	57.56	58.45	58.16	58.36	54.38	54.35	53.04
Tobacco, avg. price at auction (cts./lb.)	169.61	179.23	172.58	165.49	186.53	157.44	157.44	157.44	158.01	159.51
Rice, f.o.b. mill, Houston (\$/cwt)	16.52	16.46	16.80	16.50	15.00	15.00	14.18	13.35	13.50	13.50
Inedible tallow, Chicago (cts./lb.)	13.54	13.28	14.37	15.42	15.24	15.94	15.00	15.11	14.95	14.58
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	0.81	0.71	0.50	0.38	0.56	0.51	0.53	0.52	0.61	0.63
Rubber, N.Y. spot (cts./lb.)	46.28	45.73	46.25	47.05	46.41	44.17	43.78	43.78	43.30	43.85
Cocoa beans, N.Y. (\$/lb.)	0.55	0.52	0.47	0.50	0.41	0.43	0.42	0.41	0.45	0.46

Information contact: Mary Teymourian (202) 219-0824.

Table 25.—Indexes of Real Trade-Weighted Dollar Exchange Rates <sup>1/</sup>

	1992				1993						
	Sept	Oct	Nov	Dec	Jan	Feb	Mar P	Apr P	May P	June P	July P
	1985 = 100										
<b>Total U.S. trade 2/</b>	69.5	61.9	65.6	65.8	67.3	68.4	68.3	66.1	66.9	66.8	68.7
<b>Agricultural trade</b>											
U.S. markets	74.2	75.2	77.6	77.3	78.2	78.4	78.3	77.0	77.3	76.5	77.3
U.S. competitors	77.2	75.7	77.7	77.4	78.3	78.6	79.1	78.4	78.9	78.7	79.6
<b>Wheat</b>											
U.S. markets	94.1	94.1	96.5	95.9	97.3	98.1	99.8	98.8	99.7	95.2	95.7
U.S. competitors	74.4	71.2	73.3	73.3	74.1	73.7	73.0	72.6	72.9	74.9	75.7
<b>Soybeans</b>											
U.S. markets	60.4	61.9	64.6	64.2	65.6	65.9	65.5	63.9	64.3	64.4	65.7
U.S. competitors	53.6	53.3	63.6	53.0	53.3	53.7	53.9	53.8	54.0	51.6	51.8
<b>Corn</b>											
U.S. markets	66.4	67.3	69.2	68.9	69.6	69.3	68.6	67.1	67.1	66.5	67.1
U.S. competitors	55.6	55.9	57.5	57.2	57.5	57.7	57.6	56.3	56.4	57.9	59.0
<b>Cotton</b>											
U.S. markets	70.7	71.6	73.3	73.4	74.1	74.1	73.6	72.4	72.6	71.3	72.1
U.S. competitors	112.1	109.7	110.7	108.4	110.5	110.2	110.4	110.0	110.3	106.8	106.4

<sup>1/</sup> Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. <sup>2/</sup> Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter (202) 219-0718.

Table 26.—Trade Balance

	Fiscal year 1/							July
	1986	1987	1988	1989	1990	1991	1992	1993
	\$ million							
<b>Exports</b>								
Agricultural	26,312	27,876	35,316	39,590	40,220	37,809	42,417	42,500
Nonagricultural	179,291	202,911	258,656	301,269	326,059	356,682	377,278	30,337
Total 2/	205,603	230,787	293,972	340,859	366,279	394,291	419,695	33,417
<b>Imports</b>								
Agricultural	20,884	20,660	21,014	21,476	22,560	22,588	24,323	25,000
Nonagricultural	342,846	367,374	409,138	441,075	458,101	463,720	467,554	45,868
Total 3/	363,730	388,034	430,152	462,551	480,661	486,308	511,877	47,693
<b>Trade balance</b>								
Agricultural	5,428	7,226	14,302	18,114	17,660	15,221	18,094	17,500
Nonagricultural	-163,555	-164,463	-150,482	-139,806	-132,042	-107,038	-110,276	-15,531
Total	-158,127	-157,237	-136,180	-121,692	-114,382	-92,017	-92,162	-14,276

<sup>1/</sup> Fiscal years begin October 1 & end September 30. Fiscal year 1992 began Oct. 1, 1991 & ended Sept. 30, 1992. <sup>2/</sup> Domestic exports including Department of Defense shipments (F.A.S. value). <sup>3/</sup> Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Joel Greene (202) 219-0822.

Table 27.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			July	Fiscal year*			July
	1991	1992	1993 F	1993	1991	1992	1993 F	1993
	1,000 units				\$ million			
EXPORTS								
Animals, live (no.) 1/	1,235	1,477	—	101	546	567	—	19
Meats & preps., excl. poultry (mt)	936	1,108	2/ 900	91	2,773	3,236	—	281
Dairy products (mt) 1/	44	172	—	11	293	638	900	48
Poultry meats (mt)	628	795	900	91	737	915	—	97
Fats, oils, & greases (mt)	1,169	1,392	1,400	121	419	498	—	44
Hides & skins incl. furskins	—	—	—	—	1,451	1,337	—	108
Cattle hides, whole (no.) 1/	21,548	20,822	—	1,850	1,191	1,107	—	95
Mink pelts (no.) 1/	3,941	3,160	—	98	74	52	—	3
Grains & feeds (mt)	94,583	100,744	—	8,988	12,175	13,858	3/ 14,300	967
Wheat (mt)	26,792	34,287	35,500	2,820	2,867	4,318	4/ 4,800	369
Wheat flour (mt)	987	816	1,100	75	191	165	—	14
Rice (mt)	2,395	2,279	2,500	199	747	757	800	49
Feed grains, incl. products (mt)	52,353	50,648	50,800	2,784	5,790	5,793	5,200	284
Feeds & fodders (mt)	10,943	11,287	5/ 11,800	961	1,882	2,019	—	174
Other grain products (mt)	1,113	1,449	—	148	897	807	—	77
Fruits, nuts, & preps (mt)	2,849	3,505	—	274	3,038	3,514	3,600	271
Fruit juices incl.	—	—	—	—	—	—	—	—
froz. (1,000 hectoliters) 1/	6,311	7,787	—	700	338	427	—	38
Vegetables & preps. (mt)	2,590	2,704	—	249	2,597	2,790	—	272
Tobacco, unmanufactured (mt)	239	248	—	14	1,533	1,568	1,500	94
Cotton, excl. linters (mt)	1,565	1,494	1,200	81	2,605	2,183	1,400	112
Seeds (mt)	514	701	—	17	617	659	700	25
Sugar, cane or beet (mt)	589	492	—	29	219	154	—	9
Oilseeds & products (mt)	22,295	28,842	—	1,629	5,643	7,156	7,500	434
Oilseeds (mt)	15,815	19,970	—	1,204	3,807	4,743	—	311
Soybeans (mt)	15,139	19,247	20,500	1,162	3,465	4,311	4,600	283
Protein meal (mt)	5,626	7,022	—	328	1,113	1,431	—	59
Vegetable oils (mt)	1,051	1,650	—	97	723	982	—	64
Essential oils (mt)	13	13	—	1	183	184	—	15
Other	499	490	—	8	2,441	2,733	—	245
Total	128,613	142,498	147,000	9,604	37,609	42,417	42,500	3,080
IMPORTS								
Animals, live (no.) 1/	3,168	2,830	—	200	1,131	1,275	1,700	92
Meats & preps., excl. poultry (mt)	1,191	1,134	—	98	3,016	2,684	—	244
Beef & veal (mt)	811	813	800	68	2,025	1,933	1,900	173
Pork (mt)	322	283	270	24	865	625	700	58
Dairy products (mt) 1/	231	232	—	19	767	816	900	74
Poultry & products 1/	—	—	—	—	119	132	—	13
Fats, oils, & greases (mt)	33	46	—	5	19	26	—	2
Hides & skins, incl. furskins 1/	—	—	—	—	153	185	—	11
Wool, unmanufactured (mt)	50	54	—	5	175	167	—	14
Grains & feeds (mt)	4,189	5,446	4,700	346	1,282	1,548	1,600	128
Fruits, nuts, & preps., excl. juices (mt)	5,650	5,883	5,990	434	2,741	2,919	—	215
Bananas & plantains (mt)	3,399	3,626	3,700	286	993	1,083	1,100	82
Fruit juices (1,000 hectoliters) 1/	27,948	28,049	24,000	2,791	737	871	—	57
Vegetables & preps. (mt)	2,416	2,171	—	127	2,183	2,125	2,500	146
Tobacco, unmanufactured (mt)	215	364	400	20	698	1,299	1,200	50
Cotton, unmanufactured (mt)	18	11	—	1	16	10	—	1
Seeds (mt)	169	174	200	4	173	214	200	13
Nursery stock & cut flowers 1/	—	—	—	—	538	578	—	30
Sugar, cane or beet (mt)	1,785	1,623	—	51	717	633	—	22
Oilseeds & products (mt)	2,077	2,330	—	217	959	1,124	1,200	102
Oilseeds (mt)	445	429	—	30	151	135	—	10
Protein meal (mt)	412	629	—	58	57	84	—	9
Vegetable oils (mt)	1,220	1,273	—	129	750	904	—	83
Beverages excl. fruit juices (1,000 hectoliters) 1/	12,987	13,739	—	1,383	1,858	2,044	—	171
Coffee, tea, cocoa, spices (mt)	2,045	2,391	2,210	188	3,294	3,415	—	246
Coffee, incl. products (mt)	1,116	1,330	1,200	90	1,831	1,798	1,500	111
Cocoa beans & products (mt)	700	773	740	77	1,019	1,122	1,000	94
Rubber & allied gums (mt)	792	920	1,000	85	664	756	900	69
Other	—	—	—	—	1,348	1,503	—	126
Total	—	—	—	—	22,588	24,323	25,000	1,825

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1993 began Oct. 1, 1992 & ended Sept. 30, 1993. 1/ Not included in total volume and also other dairy products for 1991 & 1992. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1991 exports of categories used in the 1991 forecasts were 2/ 676,000 m. tons. 3/ 16,014 million, 4/ 4,426 million i.e. includes flour. 5/ 11,065 million m. tons. 6/ Less than \$500. F = forecast. — = not available.

Information contact: Joel Greene (202) 219-0822.

Table 28.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			July 1993	Change from year* earlier			July 1993
	1991	1992	1993 F		1991	1992	1993 F	
	\$ million				Percent			
<b>WESTERN EUROPE</b>	7,312	7,740	7,900	372	-1	6	3	5
European Community (EC-12)	6,778	7,184	7,300	341	-1	6	1	5
Belgium-Luxembourg	484	481	—	24	9	-1	—	77
France	571	618	—	32	22	6	—	-24
Germany	1,135	1,091	—	47	2	-4	—	9
Italy	675	684	—	20	-4	1	—	-3
Netherlands	1,561	1,813	—	96	-5	16	—	65
United Kingdom	883	882	—	58	16	0	—	-26
Portugal	251	240	—	5	-26	-4	—	-89
Spain, incl. Canary Islands	855	951	—	36	-12	11	—	22
Other Western Europe	536	546	500	30	9	2	0	-3
Switzerland	194	187	—	9	13	-4	—	-13
<b>EASTERN EUROPE</b>	306	222	500	21	-36	-29	150	39
Poland	46	49	—	6	-54	6	—	34
Yugoslavia	74	50	—	1	-43	-32	—	-79
Romania	82	78	—	8	-61	-8	—	42
Former USSR	1,758	2,691	1,600	75	-42	53	-41	-62
<b>ASIA</b>	16,094	17,762	15,700	1,348	-11	10	-12	-4
West Asia (Mideast)	1,430	1,770	1,900	136	-26	24	6	-26
Turkey	224	344	—	31	-14	54	—	-55
Iraq	0	0	0	0	-100	0	0	0
Israel, incl. Gaza & W. Bank	287	346	300	49	1	20	—	78
Saudi Arabia	536	549	400	18	7	2	-20	-45
South Asia	375	536	—	28	-48	43	—	-29
Bangladesh	67	123	—	1	-44	83	—	-96
India	94	117	—	7	-19	24	—	-57
Pakistan	144	226	200	1	-63	57	0	-68
China	668	691	400	6	-27	3	-43	-4
Japan	7,736	8,363	6,200	662	-5	8	-2	0
Southeast Asia	1,239	1,470	—	125	5	19	—	3
Indonesia	279	353	—	31	1	27	—	26
Philippines	373	443	500	46	6	19	25	-5
Other East Asia	4,846	4,934	4,900	391	-11	6	0	-1
Taiwan	1,739	1,916	2,000	156	-4	10	5	26
Korea, Rep.	2,159	2,200	2,000	169	-20	2	-9	-16
Hong Kong	745	617	900	66	9	10	13	0
<b>AFRICA</b>	1,882	2,304	2,600	186	-6	22	22	-34
North Africa	1,388	1,412	1,800	86	-9	2	29	-38
Morocco	129	156	—	13	-21	21	—	-43
Algeria	477	478	500	25	-3	0	0	-32
Egypt	692	709	800	44	-9	2	14	-40
Sub-Saharan	496	692	1,000	80	2	60	11	-30
Nigeria	44	31	—	16	38	-30	—	4,121
Rep. S. Africa	74	328	—	17	-9	345	—	-75
<b>LATIN AMERICA &amp; CARIBBEAN</b>	5,499	6,438	6,700	629	7	17	5	5
Brazil	271	143	300	17	158	-47	200	356
Caribbean Islands	1,010	970	—	90	0	-4	—	8
Central America	498	587	—	64	6	18	—	3
Colombia	124	142	—	10	-16	14	—	-30
Mexico	2,885	3,678	3,800	360	6	27	3	-1
Peru	150	179	—	19	-20	19	—	56
Venezuela	307	394	400	31	-11	28	0	6
<b>CANADA</b>	4,409	4,612	5,100	430	19	9	6	7
<b>OCEANIA</b>	349	428	400	39	10	23	0	16
<b>TOTAL</b>	37,609	42,417	42,500	3,080	-6	13	0	-6
Developed countries	20,106	21,969	22,100	1,563	2	9	0	2
Developing countries	16,831	19,758	—	1,510	-14	17	—	-12
Other countries	672	691	—	6	-26	3	—	-4

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1993 began Oct. 1, 1992 & ended Sept. 30, 1993. F = forecast. — = not available.  
 Note: Adjusted for transshipments through Canada.

Information contact: Joel Greene (202) 219-0822.

## Farm Income

Table 29.—Farm Income Statistics

	Calendar year										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 P	1993 F
	\$ billion										
1. Farm receipts	141.9	147.7	150.1	140.0	148.5	158.4	168.9	177.5	176.5	178	176 to 185
Crops (incl. net CCC loans)	67.2	69.9	74.3	63.7	65.9	71.7	77.0	80.1	81.9	85	83 to 88
Livestock	69.6	72.9	69.8	71.6	76.0	79.4	84.1	89.8	86.8	86	85 to 90
Farm related 1/	5.1	4.9	6.0	5.7	6.6	7.3	7.8	7.6	7.8	7	6 to 8
2. Direct Government payments	9.3	8.4	7.7	11.6	16.7	14.5	10.9	9.3	6.2	9	11 to 15
Cash payments	4.1	4.0	7.6	8.1	6.6	7.1	9.1	8.4	8.2	9	11 to 15
Value of PIK commodities	5.2	4.5	0.1	3.7	10.1	7.4	1.7	0.9	0.0	0	0 to 1
3. Gross cash income (1+2) 2/	151.1	156.1	157.9	152.8	165.1	172.9	179.8	186.8	184.7	188	190 to 198
4. Nonmoney income 3/	13.6	5.9	5.6	5.5	5.6	6.3	6.3	6.2	5.9	6	6 to 7
5. Value of inventory change	-10.9	6.0	-2.3	-2.2	-2.3	-3.4	4.8	3.4	-0.3	4	-5 to -1
6. Total gross farm income (3+4+5)	153.8	168.0	161.2	156.1	168.5	175.8	190.9	196.4	190.3	197	193 to 202
7. Cash expenses 4/	112.8	118.7	110.7	105.0	109.4	118.4	125.1	130.9	131.4	130	126 to 134
8. Total expenses	139.6	141.9	132.4	125.1	128.8	137.0	144.0	149.9	150.3	149	146 to 155
9. Net cash income (3-7)	38.4	37.4	47.1	47.8	55.8	54.5	54.7	55.9	53.3	57	59 to 67
10. Net farm income (8-8)	14.2	26.1	28.8	31.0	39.7	36.6	46.9	46.5	40.0	48	43 to 50
Deflated (1987\$)	16.3	28.7	30.5	32.0	39.7	37.3	43.3	41.1	34.0	39	34 to 41

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. Total may not add because of rounding. F = forecast.

Note: 1988-92 accounts (primarily expenses) have been revised to reflect improved methods for estimating farm income. Call contact for information.

Information contact: Robert McElroy (202) 219-0800.

Table 30.—Average Income to Farm Operator Households

	Calendar year					
	1988	1989	1990	1991	1992 P	1993 F
	\$ per operator household					
Farm income to household 1/	4,201	5,796	5,742	4,397	4,337	—
Self-employment farm income	3,836	4,723	4,973	2,283	2,629	—
Other farm income to household	364	1,073	768	2,114	2,010	—
Plus: Total off-farm income	28,829	26,223	33,265	31,638	35,731	—
Income from wages, salaries, and non-farm businesses	22,220	19,467	24,778	23,551	27,022	—
Income from interest, dividends, transfer payments, etc.	6,610	6,756	8,487	8,087	8,709	—
Equals: Farm operator household income	33,030	32,019	39,007	36,025	40,068	—

1/ Farm income to the household equals self-employment income plus amounts that operators pay themselves & family members to work on the farm, income from renting out acreage, & net income from a farm business other than the one being surveyed. Data for 1988-90 are based on surveys that did not fully account for small farms. Data for 1991 include an additional 350,000 farms, many with gross sales under \$10,000 & negative net farm incomes. P = preliminary. F = forecasts, not available at this time.

Information contact: Janet Perry (202) 219-0807.

**Table 31.—Balance Sheet of the U.S. Farming Sector**

	Calendar year 1/										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992F	1993 F
	\$ billion										
<b>Assets</b>											
Real estate	753.4	661.6	586.2	542.3	578.9	595.5	615.7	628.2	623.2	633	640 to 650
Non-real estate	189.8	195.2	186.5	182.1	193.7	205.6	214.1	220.2	220.7	228	225 to 235
Livestock & poultry	49.5	48.5	46.3	47.8	58.0	62.2	66.2	70.9	68.1	71	70 to 74
Machinery & motor vehicles	85.8	85.0	82.9	81.5	80.0	81.2	85.1	85.4	85.8	86	83 to 87
Crops stored 2/	23.6	26.1	22.9	18.3	17.5	23.3	23.4	22.8	23.6	24	23 to 27
Purchased inputs	—	2.0	1.2	2.1	3.1	3.5	2.6	2.8	2.6	4	2 to 4
Financial assets	30.9	32.6	33.3	34.5	35.1	35.4	36.6	38.3	40.6	43	43 to 47
Total farm assets	943.2	857.0	772.7	724.4	772.6	801.1	829.8	848.4	843.9	861	870 to 880
<b>Liabilities</b>											
Real estate debt 3/	103.2	106.7	100.1	90.4	82.4	77.6	75.4	73.7	74.4	75	73 to 77
Non-real estate debt 4/	87.9	87.1	77.5	66.6	62.0	61.7	61.8	63.1	64.3	63	63 to 67
Total farm debt	191.1	193.8	177.6	157.0	144.4	139.4	137.2	136.8	138.8	138	137 to 143
Total farm equity	752.2	663.3	595.1	567.5	628.2	661.6	692.6	711.6	705.1	723	730 to 740
	Percent										
<b>Selected ratios</b>											
Debt-to-assets	20.3	22.6	23.0	21.7	18.7	17.4	16.5	16.1	16.4	16	15 to 17
Debt-to-equity	25.5	29.2	29.8	27.7	23.0	21.1	19.8	19.2	19.7	19	18 to 20
Debt-to-net cash income	496	518	377	328	259	256	251	245	260	244	220 to 230

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 219-0798.

Table 32.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1991	1992	June 1993	July 1993	1991	1992	June 1993	July 1993	1991	1992	June 1993	July 1993
	\$ million 2/											
<b>NORTH ATLANTIC</b>												
Maine	292	301	26	25	192	213	2	15	484	513	28	41
New Hampshire	63	65	5	5	79	79	3	5	142	144	8	10
Vermont	370	389	32	31	64	63	3	9	434	452	34	40
Massachusetts	129	135	11	11	358	358	21	25	485	491	32	36
Rhode Island	12	13	1	1	57	60	3	4	69	72	4	5
Connecticut	208	240	23	21	264	249	13	19	472	489	36	40
New York	1,793	1,914	161	158	1,081	1,032	67	78	2,874	2,946	228	236
New Jersey	193	192	16	16	465	465	47	66	658	657	62	82
Pennsylvania	2,405	2,554	209	202	997	1,064	68	78	3,402	3,618	277	280
<b>NORTH CENTRAL</b>												
Ohio	1,661	1,580	143	136	2,484	2,587	116	220	4,165	4,167	259	356
Indiana	1,917	1,821	166	156	2,583	2,584	163	197	4,500	4,505	329	353
Illinois	2,353	2,202	186	176	5,181	5,431	360	363	7,534	7,634	547	539
Michigan	1,268	1,325	89	113	1,922	1,962	105	176	3,210	3,286	194	289
Wisconsin	4,191	4,313	367	348	1,225	1,186	68	90	5,417	5,499	435	438
Minnesota	3,593	3,622	307	306	3,786	3,460	143	179	7,378	7,082	449	485
Iowa	5,720	5,614	447	433	4,529	4,718	272	378	10,250	10,330	719	809
Missouri	2,268	2,188	189	190	1,842	1,935	169	118	3,911	4,123	359	308
North Dakota	670	755	36	29	1,877	2,339	134	152	2,547	3,094	170	180
South Dakota	2,125	1,966	146	114	1,188	1,263	49	109	3,314	3,229	194	223
Nebraska	5,933	5,674	515	478	3,111	3,109	130	194	9,044	8,783	845	672
Kansas	4,800	4,558	330	381	2,278	2,442	322	343	7,078	7,000	652	724
<b>SOUTHERN</b>												
Delaware	438	451	40	39	184	184	15	12	622	636	54	61
Maryland	788	804	66	69	564	587	38	61	1,352	1,391	106	129
Virginia	1,363	1,353	97	108	753	781	60	61	2,116	2,134	157	187
West Virginia	253	267	20	19	71	75	7	7	324	343	27	26
North Carolina	2,617	2,795	248	261	2,339	2,386	134	115	4,956	5,181	382	378
South Carolina	549	545	41	41	877	632	69	38	1,228	1,177	110	79
Georgia	2,162	2,309	204	221	1,772	1,764	114	94	3,934	4,073	319	315
Florida	1,172	1,160	91	99	4,953	4,985	326	212	6,125	6,145	418	311
Kentucky	1,705	1,641	101	287	1,491	1,580	48	47	3,196	3,221	149	334
Tennessee	1,044	1,061	88	89	893	1,042	44	33	1,936	2,103	132	122
Alabama	2,237	2,063	158	173	770	768	60	37	3,007	2,830	208	210
Mississippi	1,276	1,355	117	127	1,108	1,247	42	28	2,383	2,602	159	155
Arkansas	2,664	2,702	245	242	1,578	1,901	101	32	4,242	4,602	347	274
Louisiana	636	587	55	60	1,092	1,259	21	18	1,728	1,848	76	78
Oklahoma	2,788	2,498	151	252	1,088	1,137	201	175	3,856	3,635	352	428
Texas	7,881	7,523	674	727	4,336	4,097	242	451	12,217	11,620	916	1,178
<b>WESTERN</b>												
Montana	810	921	48	25	704	821	23	31	1,514	1,742	71	56
Idaho	1,065	1,173	91	88	1,586	1,643	70	61	2,651	2,816	161	147
Wyoming	668	606	19	17	189	167	4	7	837	773	23	24
Colorado	2,663	2,955	256	216	1,099	1,083	47	96	3,762	4,038	303	313
New Mexico	978	1,040	87	67	474	490	52	60	1,452	1,530	139	127
Arizona	788	892	74	67	1,081	943	57	53	1,867	1,835	131	120
Utah	550	556	44	47	171	182	10	16	721	738	54	63
Nevada	209	202	16	13	88	71	4	6	297	273	20	19
Washington	1,299	1,532	127	117	2,844	2,822	171	178	4,143	4,454	298	296
Oregon	826	795	65	57	1,699	1,695	102	177	2,525	2,490	167	235
California	5,254	5,055	423	487	12,523	13,179	801	1,005	17,777	18,234	1,224	1,492
Alaska	6	6	0	0	20	20	1	2	27	25	2	2
Hawaii	88	88	8	7	474	476	40	41	562	564	48	48
<b>UNITED STATES</b>	<b>86,780</b>	<b>86,358</b>	<b>7,060</b>	<b>7,352</b>	<b>81,942</b>	<b>84,810</b>	<b>5,153</b>	<b>5,989</b>	<b>168,721</b>	<b>171,168</b>	<b>12,213</b>	<b>13,341</b>

1/ Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 219-0806. To receive current monthly cash receipts via mail or E-Mail contact Linda Farmer at (202) 219-0804.

Table 33.—Cash Receipts From Farming

	Annual						1992	1993				
	1987	1988 R	1989 R	1990 R	1991 R	1992 R	July	Mar	Apr	May	June	July
	\$ million											
Farm marketings & CCC loans*	141,844	151,164	161,163	169,973	168,721	171,168	13,533	12,839	12,262	12,575	12,213	13,341
Livestock & products	75,993	79,434	84,122	89,843	88,780	86,358	7,194	7,549	7,840	7,827	7,060	7,352
Meat animals	44,478	46,492	46,857	51,911	51,089	48,427	3,715	4,347	4,365	4,510	3,799	3,903
Dairy products	17,727	17,641	19,398	20,149	18,037	19,848	1,741	1,818	1,734	1,793	1,675	1,647
Poultry & eggs	11,515	12,868	15,372	15,243	15,122	15,441	1,361	1,391	1,361	1,339	1,386	1,424
Other	2,274	2,433	2,498	2,540	2,531	2,642	378	193	180	188	200	378
Crops	65,851	71,720	77,040	80,130	81,942	84,810	6,340	5,289	4,623	4,748	5,153	5,989
Food grains	5,790	7,469	8,247	7,517	7,410	8,890	1,330	347	223	258	1,097	1,205
Feed crops	14,835	14,283	17,054	18,671	19,491	20,073	1,438	1,404	842	847	1,100	1,512
Cotton (lint & seed)	4,189	4,546	5,033	5,489	5,236	5,207	41	179	103	34	60	18
Tobacco	1,816	2,083	2,415	2,741	2,886	2,991	213	36	5	0	0	63
Oil-bearing crops	11,283	13,500	11,866	12,258	12,700	12,996	453	866	402	778	584	591
Vegetables & melons	9,898	9,818	11,596	11,449	11,552	11,436	1,116	949	1,239	1,390	1,027	928
Fruits & tree nuts	8,065	8,027	9,173	9,440	9,888	10,183	1,011	376	371	353	584	937
Other	10,176	10,993	11,657	12,566	12,778	13,065	739	1,131	1,437	1,087	710	733
Government payments	16,747	14,480	10,887	9,298	8,214	9,169	82	3,938	2,001	945	358	107
Total	155,591	165,582	171,914	179,218	175,506	179,338	13,615	16,778	14,263	13,520	12,589	13,448

\* Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. R = revised.

Information contact: Roger Strickland (202) 219-0806. To receive current monthly cash receipts via mail or E-Mail contact Linda Farmer at (202) 219-0804.

Table 34.—Farm Production Expenses

	Calendar year									
	1984	1985	1986	1987	1988	1989	1990	1991	1992P	1993F
	\$ million									
Feed purchased	19,393	18,949	17,472	17,463	20,246	20,744	20,397	19,330	19,832	18,000 to 22,000
Livestock & poultry purchased	9,487	9,184	9,758	11,842	12,784	13,138	14,833	14,272	13,780	12,000 to 18,000
Seed purchased	3,388	3,128	3,188	3,259	4,062	4,400	4,521	5,119	4,918	4,000 to 6,000
Farm-origin inputs	32,256	29,281	30,418	32,564	37,071	38,281	39,742	39,722	38,531	37,000 to 41,000
Fertilizer & lime	5,360	7,512	6,820	6,453	7,681	8,177	8,210	8,671	8,340	7,000 to 9,000
Fuels & oils	7,298	6,438	6,310	4,957	4,800	4,772	5,790	5,599	5,311	4,000 to 7,000
Electricity	2,080	1,878	1,795	2,158	2,360	2,648	2,607	2,834	2,811	2,000 to 4,000
Pesticides	4,688	4,334	4,324	4,512	4,146	5,013	5,364	6,324	6,475	6,000 to 8,000
Manufactured inputs	22,404	20,159	18,249	18,078	18,987	20,810	21,071	23,229	22,736	21,000 to 25,000
Short-term interest	10,398	8,735	7,387	6,767	6,674	6,860	6,528	6,124	5,793	4,000 to 7,000
Real estate interest 1/	10,733	9,878	9,131	8,205	7,581	7,190	6,740	5,963	5,592	5,000 to 7,000
Total interest charges	21,129	18,613	15,498	14,972	14,255	13,850	13,268	12,088	11,385	10,000 to 14,000
Repair & maintenance 1/	6,418	6,370	6,426	6,759	7,717	8,407	8,553	8,630	8,489	8,000 to 10,000
Contract & hired labor	9,427	10,008	9,484	9,975	10,954	11,928	13,050	13,926	14,060	12,000 to 16,000
Machine hire & custom work	2,566	2,354	2,099	2,105	2,510	2,937	2,959	3,085	3,317	2,000 to 4,000
Marketing, storage, & transportation	4,012	4,127	3,652	4,078	3,518	4,208	4,211	4,719	4,542	3,000 to 5,000
Misc. operating expenses 1/ 2/	10,331	10,010	9,759	11,171	12,001	12,003	12,727	13,539	12,844	10,000 to 14,000
Other operating expenses	32,751	32,868	31,420	34,088	36,697	39,481	42,400	43,699	43,232	41,000 to 46,000
Capital consumption 1/	20,847	19,299	17,788	17,091	17,378	17,883	17,682	17,845	17,769	18,000 to 20,000
Taxes 1/	4,337	4,542	4,612	4,853	4,955	5,214	5,690	5,813	5,838	5,000 to 7,000
Net rent to nonoperator landlords	8,150	7,690	6,099	7,124	7,684	8,731	9,184	9,112	9,603	9,000 to 11,000
Other overhead expenses	33,334	31,531	28,499	29,069	30,016	31,807	32,517	32,370	33,210	32,000 to 35,000
Total production expenses	141,876	132,433	125,084	128,772	137,026	144,029	149,897	150,307	149,094	160,000 to 152,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases, dairy assessments & feeding fees paid by nonoperators. Totals may not add because of rounding. P = preliminary. F = forecast.

Information contacts: Chris McGath (202) 219-0804, Robert McElroy (202) 219-0800.

Table 35.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal year									
	1985	1986	1987	1988	1989	1990	1991	1992	1993 E	1994 E
	\$ million									
Feed grains										
Corn	4,403	10,524	12,346	8,227	2,863	2,450	2,387	2,105	4,882	3,421
Grain sorghum	463	1,185	1,203	784	467	361	243	190	400	310
Barley	336	471	394	57	45	-93	71	174	203	133
Oats	2	28	17	-2	1	-5	12	32	15	12
Corn & oat products	7	5	7	7	8	8	9	9	9	7
Total feed grains	5,211	12,211	13,967	9,053	3,384	2,721	2,722	2,510	5,509	3,883
Wheat	4,691	3,440	2,836	678	53	806	2,958	1,719	2,424	2,304
Rice	990	947	906	128	631	667	867	715	1,035	955
Upland cotton	1,553	2,142	1,786	666	1,461	-79	382	1,443	2,304	2,329
Tobacco	455	253	-346	-453	-367	-307	-143	29	130	25
Dairy	2,085	2,337	1,166	1,295	679	505	839	232	315	249
Soybeans	711	1,597	-478	-1,676	-86	5	40	-29	9	-37
Peanuts	12	32	6	7	13	1	48	41	-11	4
Sugar	184	214	-65	-246	-25	15	-20	-19	-27	-24
Honey	81	89	73	100	42	47	19	17	15	15
Wool	109	123	152	1/ 5	93	104	172	191	176	196
Operating expense 3/	346	457	535	614	620	618	625	6	6	6
Interest expenditure	1,435	1,411	1,219	425	98	632	745	532	98	39
Export programs 4/	134	102	276	200	-102	-34	733	1,455	3,142	1,833
1989/93 Disaster/Tree/										
livestock assistance	0	0	0	0	3,919	2/ 161	121	1,054	1,389	2,346
Other	-314	486	371	1,665	110	609	2	-158	636	1,297
Total	17,683	25,841	22,408	12,461	10,523	8,471	10,110	9,738	17,150	15,420
FUNCTION										
Price-support loans (net)	6,272	13,628	12,199	4,579	-926	-399	419	584	2,152	1,366
Direct payments 5/										
Deficiency	6,302	6,166	4,833	3,971	5,798	4,178	6,224	5,491	8,573	7,307
Diversion	1,525	84	382	8	-1	0	0	0	0	0
Dairy termination	0	489	587	260	168	189	96	2	0	0
Loan Deficiency	0	27	60	0	42	3	21	214	385	425
Other	0	0	0	0	0	0	0	140	203	249
Disaster	0	0	0	6	4	0	0	0	0	0
Total direct payments	7,827	6,746	5,862	4,245	6,011	4,370	6,341	5,847	9,161	7,981
1988-93 crop disaster	0	0	0	0	3,386	2/ 5	6	960	1,328	2,342
Emergency livestock/tree/										
forage assistance	0	0	0	31	533	156	115	94	61	4
Purchases (net)	1,331	1,670	-479	-1,131	116	-48	646	321	453	376
Producer storage										
payments	329	485	832	658	174	185	1	14	12	69
Processing, storage,										
& transportation	657	1,013	1,659	1,113	659	317	394	185	121	135
Operating expense 3/	346	457	535	614	620	618	625	6	6	6
Interest expenditure	1,435	1,411	1,219	425	98	632	745	532	98	39
Export programs 4/	134	102	276	200	-102	-34	733	1,455	3,142	1,833
Other	-648	329	305	1,727	-46	669	86	-260	616	1,269
Total	17,683	25,841	22,408	12,461	10,523	8,471	10,110	9,738	17,150	15,420

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Approximately \$1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates & were not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Promotion Program, starting in fiscal 1991 & starting in fiscal 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, & Dairy Export Incentive Program. 5/ Includes cash payments only. Excludes payment-in-kind in fiscal 83-85 & generic certificates in fiscal 86-93. E = Estimated in the fiscal 1994 Mid-Session Review Budget which was released September 1, 1993 based on June, 1993 supply & demand estimates. These estimates incorporate the aggregate outlay impact of the FY 1993 Disaster Supplemental for the Midwest floods and the Omnibus Budget Reconciliation Act of 1993. The impact of the Disaster Act and the Reconciliation Act on outlay estimates for individual CCC commodities is not reflected in this table. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 720-5148.

## Food Expenditures

Table 36.—Food Expenditures

	Annual			1993			1993 year-to-date		
	1990R	1991R	1992R	July	Aug	Sept P	July	Aug	Sept P
\$ billion									
Sales 1/									
Off-premise use 2/	302.6	315.3	319.4	28.8	27.0	26.6	187.7	214.7	241.3
Meals & snacks 3/	225.3	232.4	240.4	22.5	22.2	20.8	145.8	168.0	188.8
1992 \$ billion									
Sales 1/									
Off-premise use 2/	312.9	317.8	319.3	28.3	28.5	28.0	184.3	210.7	236.7
Meals & snacks 3/	237.7	237.1	240.3	22.1	21.8	20.4	144.2	166.0	188.3
Percent change from year earlier (\$ bil.)									
Sales 1/									
Off-premise use 2/	8.9	4.2	1.3	2.9	-0.6	2.3	2.0	1.7	1.8
Meals & snacks 3/	7.2	3.2	3.4	9.8	4.8	5.4	5.6	5.5	5.5
Percent change from year earlier (1992 \$ bil.)									
Sales 1/									
Off-premise use 2/	2.2	1.5	0.5	0.4	-2.8	0.4	0	-0.3	-0.3
	2.4	-0.2	1.3	7.8	2.9	3.5	4.1	4.0	3.9

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. R = revised, P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food nonalcoholic beverages & pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr. Econ. Rpt. No. 575, Aug 1987.

Information contact: Alden Manchester (202) 219-0880.

## Transportation

Table 37.—Rail Rates; Grain & Fruit-Vegetable Shipments

	Annual			1992 Aug	1993					
	1990	1991	1992		Mar	Apr	May	June	July	Aug
Rail freight rate index 1/ (Dec. 1984=100)										
All products	107.5	109.3	109.9	108.9	110.8	110.8	110.8 P	110.7 P	110.7 P	110.6 P
Farm products	110.4	111.4	111.1	110.2	113.5	113.5	113.3 P	113.2 P	113.2 P	113.2 P
Grain	110.1	111.2	111.4	110.3	114.5	114.5	114.2 P	114.1 P	114.1 P	114.0 P
Food products	105.4	108.1	108.7	108.1	108.9	108.8	108.7 P	108.8 P	108.9 P	108.9 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	27.6	28.8	27.4	28.1	30.1 P	28.0 P	24.7 P	24.7 P	25.8 P	25.8 P
Barge shipments (mil. ton) 3/	3.8	3.3	3.4	4.8	3.0	2.6	3.7	3.7	0.4	1.7
Fresh fruit & vegetable shipments 4/ 5/										
Piggy back (mil. cwt)	1.8	1.5	1.8	1.2	1.8	1.5	2.0	1.9	1.1	1.0
Rail (mil. cwt)	2.3	2.1	2.6	1.0	2.8	2.0	3.0	3.2	1.8	0.8
Truck (mil. cwt)	41.5	41.9	44.0	38.9	44.0	48.2	57.4	55.6	48.5	39.4
Cost of operating trucks hauling produce 4/										
Fleet operation (cts./mile)	130.5	128.5	124.1	124.7	127.0	127.0	127.3	127.2	127.0	126.2

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Shipments on Illinois & Mississippi waterways, U.S. Corps of Engineers. 4/ Agricultural Marketing Service, USDA. 5/ Preliminary data for 1993. P = preliminary. — = not available.

Information contact: T.O. Hutchinson (202) 219-0840.

## Indicators of Farm Productivity

Table 38.—Indexes of Farm Production, Input Use & Productivity <sup>1/</sup>

New data are being incorporated. The table will appear in the December issue.  
Information contact: Eldon Ball (202) 219-0432.

## Food Supply & Use

Table 39.—Per Capita Consumption of Major Food Commodities <sup>1/</sup>

Commodity	1985	1986	1987	1988	1989	1990	1991	1992 P
	Pounds							
Red meats 2/3/4/	124.9	122.2	117.4	119.5	115.9	112.4	111.9	114.1
Beef	74.6	74.4	69.6	68.6	65.4	64.0	63.1	62.8
Veal	1.6	1.6	1.3	1.1	1.0	0.9	0.8	0.8
Lamb & mutton	1.1	1.0	1.0	1.0	1.1	1.1	1.0	1.0
Pork	47.7	45.2	45.6	48.8	48.4	46.4	46.9	49.6
Poultry 2/3/4/	45.2	47.1	50.7	51.7	53.6	55.9	58.0	60.1
Chicken	36.1	37.0	39.1	39.3	40.5	42.1	43.9	45.9
Turkey	9.1	10.2	11.6	12.4	13.1	13.8	14.1	14.2
Fish & shellfish 3/	15.0	15.4	16.1	15.1	15.6	15.0	14.8	14.7
Eggs 4/	32.9	32.6	32.7	31.6	30.4	30.1	30.0	30.2
Dairy products								
Cheese (excluding cottage) 2/5/	22.6	23.1	24.1	23.7	23.8	24.6	25.0	26.0
American	12.2	12.1	12.4	11.5	11.0	11.1	11.1	11.3
Italian	6.5	7.0	7.6	8.1	8.5	9.0	9.4	10.0
Other cheese 6/	3.9	4.0	4.1	4.1	4.3	4.6	4.6	4.7
Cottage cheese	4.1	4.1	3.9	3.9	3.6	3.4	3.3	3.1
Beverage milks 2/	229.7	228.6	226.5	222.4	224.3	221.7	221.2	218.5
Fluid whole milk 7/	123.4	118.5	111.9	105.7	97.6	90.4	87.4	84.1
Fluid lowfat milk 8/	93.7	98.6	100.6	100.5	106.5	108.4	109.9	109.4
Fluid skim milk	12.6	13.5	14.0	16.1	20.2	22.9	23.9	25.0
Fluid cream products 9/	6.7	7.0	7.1	7.1	7.3	7.1	7.3	7.5
Yogurt (excluding frozen)	4.1	4.4	4.4	4.7	4.3	4.1	4.2	4.3
Ice cream	18.1	18.4	18.4	17.3	16.1	15.8	16.3	16.4
Ice milk	6.9	7.2	7.4	8.0	8.4	7.7	7.4	7.1
Frozen yogurt	—	—	—	—	2.0	2.8	3.5	3.1
All dairy products, milk equivalent, milkfat basis 10/	593.8	591.5	601.3	582.9	585.2	569.7	565.2	564.6
Fats & oils — Total fat content	64.3	64.4	62.9	63.0	60.4	62.2	63.8	65.6
Butter & margarine (product weight)	15.7	16.0	15.2	14.8	14.6	15.3	14.8	15.2
Shortening	22.9	22.1	21.4	21.5	21.5	22.2	22.4	22.4
Lard & edible tallow (direct use)	3.7	3.5	2.7	2.6	2.1	2.5	3.1	4.1
Salad & cooking oils	23.6	24.2	25.4	25.8	24.0	24.2	25.2	25.6
Fresh fruits 11/	110.6	117.4	121.6	120.7	123.1	116.8	113.2	122.7
Canned fruit 12/	12.7	12.9	13.6	13.3	13.3	13.5	12.3	14.4
Dried fruit	2.9	2.7	3.1	3.3	3.2	3.6	3.1	3.2
Frozen fruit	3.3	3.6	3.9	3.8	4.6	4.3	3.9	4.7
Selected fruit juices 13/	66.9	65.0	70.0	64.7	67.0	59.6	63.8	59.6
Vegetables 11/								
Fresh	103.0	100.5	107.0	111.5	115.5	113.3	110.4	109.3
Canning	95.1	95.6	95.1	91.2	98.7	101.7	103.4	106.3
Freezing	19.6	18.5	19.3	21.1	20.7	20.5	21.6	20.8
Potatoes, all 11/	122.4	126.0	125.9	122.5	127.1	127.8	130.6	133.5
Sweet potatoes 11/	5.4	4.4	4.4	4.1	4.1	4.6	4.0	4.3
Peanuts (shelled)	6.3	6.4	6.4	6.9	7.0	6.0	6.5	6.4
Tree nuts (shelled)	2.3	2.2	2.2	2.3	2.4	2.6	2.3	2.4
Flour & cereal products 14/	156.1	162.1	170.8	173.7	175.4	183.5	185.4	187.0
Wheat flour	124.7	125.7	130.0	130.0	129.6	135.8	136.5	138.3
Rice (milled basis)	9.0	11.8	14.0	14.3	15.2	16.2	16.8	16.8
Caloric sweeteners 15/	131.3	129.6	133.7	135.1	137.3	140.7	141.7	143.3
Coffee (green bean equiv.)	10.5	10.5	10.2	9.8	10.1	10.3	10.5	10.6
Cocoa (chocolate liquor equiv.)	3.7	3.8	3.8	3.8	4.0	4.3	4.6	4.6

1/ In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, & ending stocks. Calendar-year data except fresh citrus fruits, peanuts, tree nuts, & rice, which are on crop-year basis. 2/ Total may not add due to rounding. 3/ Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4/ Excludes shipments to the U.S. territories. 5/ Natural equivalent of cheese & cheese & other dairy products. Includes miscellaneous cheese not shown separately. 6/ Includes Swiss, Brick, Munster, cream, Neufchatel, Blue, Gorgonzola, Edam, & Gouda. 7/ Plain & flavored. 8/ Plain & flavored & buttermilk. 9/ Heavy cream, light cream, half & half, & sour cream & dip. 10/ Includes condensed & evaporated milk & dry milk products. 11/ Farm weight. 12/ Excludes pineapples & berries. 13/ Single strength equivalent. 14/ Includes rye, corn, oat, & barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, & fuel. 15/ Dry weight equivalent. — not available. P = Preliminary.

Information contact: Judy Jones Putnam (202) 219-0862.

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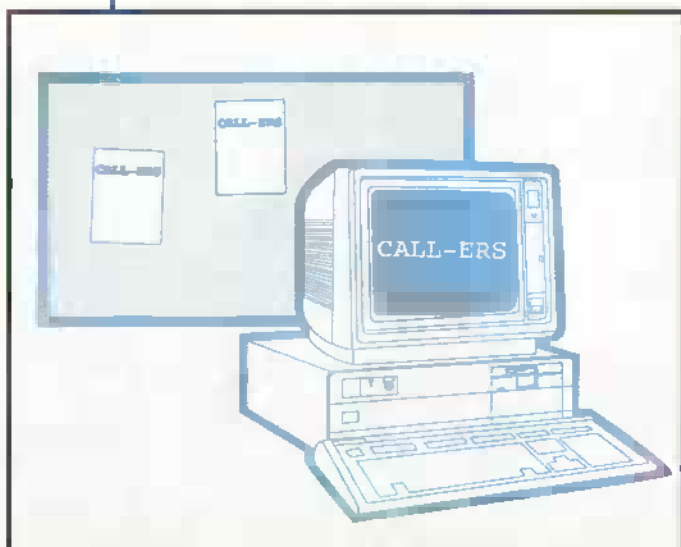
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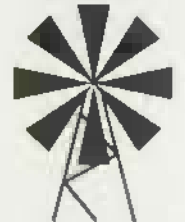
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